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**DEDUCTIVE REASONING AS A STRATEGY TO OVERCOME
NATIVE LANGUAGE INTERFERENCE IN SPEAKING TASKS
WITH EIGHTH GRADERS AT JORGE VOLIO JIMÉNEZ
BILINGUAL HIGH SCHOOL DURING THE SECOND
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SELENA VALLEJOS SUÁREZ

MSC. YANITH DELGADO CHACÓN

SEDE ARANJUEZ

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Dedication

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Abstract

The problem statement that this investigation aimed to answer was “ how can deductive reasoning strategy help students overcome native language interference in speaking tasks.” The investigation was carried out with eighth graders at Jorge Volio Jimenez Bilingual High School in Cartago, Costa Rica. The method used in this investigation was the qualitative in order to implement and evaluate the deductive reasoning strategy as a way to overcome native language interference when speaking English. The reason why the researcher considered this strategy efficient was because of the way it works. The fact that students were aware of following instructions and performed with minimal assistance from the teacher was good because the students gained independence and improved their critical thinking. Furthermore, the purpose of this strategy was accomplished, since and it allow the students to break down information that was already provided, and at the same time let the students reach a conclusion with minimal assistance from the teacher. At the same time, students’ awareness helped them to overcome native language interference when speaking. The researcher was also intended to help students who struggled the most in classes due to memorization. Within this strategy, students were able to put into practice the information acquired. The researcher noticed a significant improvement when students performed all the speaking tasks and it was also seemed as though the students were applying it in a natural way.

Resumen

La pregunta de investigación de la presenta tesina se formula de la siguiente manera "¿cómo puede la estrategia de razonamiento deductivo ayudar a los estudiantes a superar la interferencia del idioma nativo en las tareas de habla"? Esta investigación se realizó con estudiantes de octavo grado en el Colegio Bilingüe Jorge Volio Jiménez en Cartago, Costa Rica. El método utilizado en esta investigación fue el cualitativo y por medio del mismo la implementación y evaluación de la estrategia de razonamiento deductivo como una forma de superar la interferencia del idioma nativo cuando se habla inglés. Esta estrategia se puso en práctica por medio de diferentes tareas orales. La razón por la cual el investigador consideró esta estrategia eficiente fue debido a la forma en que funciona. El hecho de que los estudiantes fueran conscientes de seguir las instrucciones y se desempeñaran con la mínima ayuda del maestro fue muy placentero, ya que de esta forma los estudiantes desarrollaron su independencia y mejoraron su pensamiento crítico al momento de resolver problemas. Además, el propósito de esta estrategia fue logrado, dado que los alumnos desglosaron la información que ya se había proporcionado y, al mismo tiempo, llegaron a una conclusión por sus propios medios y con la mínima asistencia del maestro. Al mismo tiempo, la conciencia de los estudiantes les ayudó a superar la interferencia del idioma nativo a la hora de hablar. El investigador también tenía la intención de ayudar a los estudiantes que fracasaban o les tomaba más tiempo lograr sus objetivos, ya que pensaban que todo se logra memorizando la información. Dentro de esta estrategia los alumnos pudieron poner en práctica la información adquirida y convertirla en conocimiento. El investigador notó una mejora significativa cuando los estudiantes realizaron todas las tareas del habla y también parecía que los estudiantes lo estaban aplicando de una manera natural.

Chapter 1

Introductory Framework

In this chapter, relevant points are explained in different steps. The first step is forming a problem statement, which in the case of this study is that there is an overall lack of logical reasoning to solve problems in English language learning. The question that the investigation aims to answer is how deductive reasoning strategy can help eighth graders overcome native language interference when performing speaking tasks? The next section includes the objectives of the investigation that are broken down into one general objective, which is to analyze the effectiveness of deductive reasoning in speaking skills. In addition, there are also three specific objectives; the first is to determine factors that cause native language interference; the second, to implement the deductive reasoning strategy to overcome it; and third, to evaluate the outcomes. The purpose of the objectives is to encompass the steps that the investigation aims to accomplish.

The justification of the study is to develop a method to get students to think on their own with minimal assistance. The problem of native language interference deserves to be investigated, as it is the most common issue that students of all ages have when learning a foreign language. The study can be applied to not only to the English learning, but also to other languages, as well. It must be stated that there are also some implications for the development of the human way of thinking. Therefore, the antecedents consist of recent theses or investigations dealing with topics such as meta-cognition, transfer errors, and a comparison between deductive and inductive reasoning. Furthermore, this investigation is intended for students to learn how to reason deductively and think by themselves when they are accomplishing speaking tasks in English.

1.1 Problem Statement

The lack of deduction to solve problems is an everyday issue in the classrooms, as students struggle to make connections between the different concepts and the associated vocabulary; consequently, those factors slow the learning process. Nowadays, this occurs due to the lack of learning how to reason deductively and thus come up with a conclusion individually. Martin (2017), a professor of psychology at University of Lethbridge, explained that deductive reasoning must be expanded as a main strategy in all school subjects in order for students to learn how to transform the information they get into their knowledge, so it can lead them to understanding instead of just memorizing a lot of information and getting the right answers in the tests.

In addition, Martin (2017) affirmed that “Being unable to use deductive reasoning means that an individual is unable to follow the logic that is used to reach a conclusion that is the basis for deductive reasoning.” Thus, what this investigation intends to do is to allow students to perform speaking tasks and apply reasoning while solving them. Therefore, instead of trying to come up with the answer by looking for sources and depending on what others say, students have to take into consideration the deduction process. Sometimes, professors or even students’ parents ask themselves why their students or children fail most of the time when attempting to acquire a second language and why it is becoming so difficult for them to produce the language orally. The answer to all those questions is simple, as the reason why is that students learned that everything is done by memorization instead of understanding in order to apply it later. Nonetheless, students are not the only ones to blame as professors should also bear a portion of the responsibility.

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The aim of this investigation is to find out whether the deductive reasoning strategy together with some specific speaking tasks can help students to think on their own and to avoid native language interference when speaking in the target language. The speaking tasks that will be used are, “What Am I?” and the aim of this task is to make students interact and speak in English as much as they can; “Question-and-answer task” that will help students to determine what are true or false cognates in English and they will learn to think and provide answers in a short amount of time when someone is speaking to them; and “Picture-cued story-telling task” that will help students in their ability to discuss and form logical conclusions. This is an effort to also better acquire a second language. Thus, the question remains: how can the deductive reasoning strategy help eighth graders overcome native language interference when performing speaking tasks?

1.2 Objectives of the Investigation

1.2.1 General Objective

To analyze the deductive reasoning strategy effectiveness when native language interference appears while solving English speaking tasks

1.2.2 Specific Objectives

- 1.To determine the factors causing native language interference while speaking
- 2.To implement the deductive reasoning strategy to overcome the native language interference
- 3.To evaluate the outcomes after applying the deductive reasoning strategy

1.3 Justification of the Study

The purpose of this study is to help students to diminish an underlying problem that occurs in everyday situations and not just when learning a target language, which is using already available information inaccurately. Instead of making an analysis of the variables when learning English, students end up relying on the book or what the teacher had previously told them, but in the wrong order or without context resulting in a logical fallacy. Students cannot always rely on what the book or their teacher says because one minor mistake can lead to more serious errors. Consequently, they must rely on their own reasoning and proper method of analysis.

The present study aims get students thinking on their own and in that way, they will be able to perform well in different speaking tasks by applying the deductive reasoning strategy. The investigation is convenient because teachers will not have to order or command students to perform in a certain way. They will end up doing the work on their own with minimal assistance from the teacher, instead of constantly needing supervision. Learning how to reason deductively and come up with conclusions on their own will help students to solve problems not only in schools, but also in real life.

The target audience in this investigation are students on eighth grade in a private school. While in elementary school, most of them attended public schools, which means that they acquired only the basic elements of English since early childhood. The researcher can affirm it because she was a student in a public school. In public institutions, students only learn the basic

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structures of English because of different factors such as programs, number of students in each class, curriculum, and the limited time that professors have to teach the four skills.

The eighth grade group has difficulties in language learning because they end up comparing in an incorrect way their native language and the target language (two sets of information) trying to find a common variable or constant. Also, every time they speak, it is noticeable the lack of vocabulary they have. However, sometimes two different languages may not have anything similar or in common. The study applies three separate tasks in the form of games that the students will take part in, forcing on the use of deductive reasoning. The aim of the first task “what am I?” is to force students to produce the language and let the researcher realize how much the native language interferes when they try to express themselves in English. This is an ice breaker task played in most social circles to have individuals to know each other better and be in a more relaxed environment. The task requires that each student has a vocabulary word posted on a paper on their back and ask questions subsequently until he or she figures out “what or who they are.”

The second task to be used is called “question-and-answer task” and requires that students respond in their target language to some questions provided by the teacher. The students will try to determine if something is accurate (true) or inaccurate (false). It helps students to determine what are true or false cognates in English. And the third one is called a “picture-cued story-telling task,” which is a series of pictures that will be given to the students, so they can tell a story following the sequence of those pictures according to their own thinking. Each student will have different series of pictures in order to avoid repetition in the way of speaking. This will help students in their ability to discuss and form logical conclusions.

1.4 Antecedents

Reasoning is the process of using existing knowledge to draw conclusions, make predictions, or construct explanations. According to Flavell (1976), director of social psychology and cognitive development, Brown (1978), an educational psychologist, meta-cognition is when an individual is aware of his or her own thinking process when performing a task or learning a new skill (Hampton, 2010). This process is a way for individuals to learn how to think and have deductive reasoning without being led to a conclusion externally. In language learning, students of all levels experience the problem of influencing or “transferring” attributes of their first language (L1) to their target language (L2), an obstacle known as transfer error or interlingual error. This can be attributed to native language interference. This negative role first appeared in the early forties and fifties and was suggested initially by Fries (1945) and Lado (1957), applied linguists at the English Language Institute of the University of Michigan (Touchie, 1986). The theory of meta-cognition has been used in language teaching for decades to overcome this problem and it is displayed directly within the teaching strategies professors use in the classroom. For the purpose of this thesis, the focus is on that one issue.

According to Babbie (2010), an expert on Sociology, deduction begins with an expected pattern that is tested against observations (Babbie, E. R., 2010). In other words, deductive reasoning is when people make a logical conclusion in a subject by analyzing information from the general to the specific. They come to a theory and test it through observation repeatedly. For example, babies can realize when they are doing something wrong by the consequences they experience as a result of their actions. The inductive approach is just the opposite (from specific to general). The deductive approach is best for lower level English learners, who need a clear

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tool from which to begin with or learners who lack the training to find rules by themselves. The inductive approach is best for students who have already experienced.

An international thesis study done by Esther Berendse is an investigation found regarding the phenomena. In her study, Berendse (2012) compared the two reasoning approaches, deductive and inductive. It was noticed that after performing a pretest, a post-test, and a retention test later, the deductive focus group experienced improvement on the second test because they noticed errors from the first test and worked to fix them. However, the group leveled out when tested for memory.

On the other hand, the inductive group experienced improvement after the first test, for the same reason; but when tested for memory they did worse. This is because the sample of students had to answer questions more specifically or to follow a pattern. They could not remember their answers when taking the retention test. In other words, the deductive focus group decided about a general discussion topic and the inductive group could not. The inductive group failed when trying to perform the activity, since they were focused on memorization and started the activity without setting a plan on how to do it or how they will perform it better than the other test.

On the other hand, a study done by Nadine Jung, Christina Wranke, Kai Hamburger, and Markus Knauff (2014), experts in psychology and philosophy at Justus Liebig University, explained how emotions can impact logical reasoning and how they have an important effect in the way human beings think, solve problems, and decide. The experts did four experiments with the participants. The focus of the thesis compares one. The participants had to pass a manipulated intelligence test and a set of logical / reasoning deduction problems. The result of the tests demonstrated how emotions have a great influence on reasoning performance. As a

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result, experts concluded that performance is better when there is a compatibility between emotion and content.

The experiment that the experts carried out with the participants was called “emotions in the Wason Selection Task.” The participants were tested individually and their emotions were measured with the German version of the positive and negative affect schedule and their scores were computed. The Wason Selection Task was developed in 1966 by Peter Cathcart Wason, a cognitive psychologist at University College London. The participants were required to state the emotional intensity on a five point scale: 1 = “not at all,” 2 = “a little,” 3 = “moderately,” 4 = “quite a bit,” and 5 = “very much” according to each word given (a list of ten positive and ten negative adjectives). After that, the participants were divided into three groups in order to accomplish an IQ sub-test in psychological research. The test was based on thirteen items from three categories: sentence completion, calculation, and matrix tasks. The experts chose thirteen problems that were the most difficult for the first group, then with moderate difficulty for the second group according to the norms, and the easiest items from the IQ-test for the third group.

When the participants were solving the IQ-test, the experts told them the limited time they had to do it and that the idea was to increase the effect of the emotion manipulation. At the end, when the participants got their test done, the experts provided verbal feedback on their performance in order to impact their emotional state. The feedback that experts gave to the group with the difficult problems was, “We are sorry to say that the analysis of your data showed that your performance was below the average student performance.” The feedback for the neutral emotion group was, “The analysis of your data showed that your performance was on average student performance.” Finally, the last feedback for the easy items was, “The performance was above the average of student performance.” Experts evaluated the participants’ emotions in order

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to see if the application was successful. As concluded, the results indicated that the emotions of an individual influence reasoning performance were independent of the task. The participants with negative emotions tended to perform the worst, the participants with positive emotions were better, but overall, and the participants in a neutral emotional state performed the best. This shows that students in an English teaching environment need motivation and feedback quite consistently.

1.5 Scope

The goal is for students to learn how to reason deductively and think by themselves when they are accomplishing speaking tasks in English. In order to get this goal, deductive reasoning strategy is going to be implemented as a main tool to help students overcome native language interference because students tend to retain more information when they are not pressured and that is the way the proposed strategy works. Students need to learn how to fix problems without the direct assistance of anyone else not only in classes, but also in their everyday life. It also keeps students from only memorizing answers or patterns because situations will never be the same and, in that way, students will know how to apply the same form of reasoning to all situations.

Language learning experiences show how difficult it is for students to keep from memorizing patterns in tenses and vocabulary instead of coming to a natural conclusion. Memorizing patterns are needed to a certain extent, but also is practice in different situations to determine how vocabulary can be used in real life. Some advantages of the deductive reasoning strategy are that it is straight to the point and therefore saves time, respects the maturity and level of intelligence of the students, allows the teacher to deal with linguistic problems as they come up, and confirms the students' expectations about learning in the classroom. The tasks will also

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benefit the students in several ways in the acquisition of the target language, but also, they show results of what can be improved when teaching. Also, the interaction in the group and the collection of other classmates' ideas will help the students to be more open. Being surrounded with people that provide good energy, ideas, techniques, and ways to conclude, makes the environment peaceful and good.

Chapter II

Theoretical Framework

This section contains theories developed recently by experts, scientists, and professors. The information collected has great value for the researcher of this investigation. Each theory is analyzed with additional points of view, in an attempt to explain pragmatic methods for applying each in the investigation, as well as the benefits that each theory contributes.

The theories mentioned in this investigation are: behaviorist theory, which explains that language learning is the result of stimulus and response, and that students perform better when they have positive reinforcement. Then, constructivism theory that consists on letting students build their own way of learning, and finally the meta-cognition theory that explains the processes on how human beings manipulate the information acquired.

2.1 Literature Review

Some of the theories encompass cognitive and meta-cognitive thinking, behaviorism, deductive reasoning, language transfer and processing, second language acquisition, and assessing speaking of a language and its importance. The review will focus on different aspects of each of these theories, including advantages and disadvantages, how they are structured, and the researcher's points of view.

2.1.1 Behaviorist Theory

When studying language learning, the acquisition of the native language will not always be the same as that of the second language. Meaning, the processes are different to everyone. Acquiring a native language is based more on repetition and listening. A native language learner

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will conclude that a word refers to an object because of what they are led to believe over time. For example, babies tend to rely on the meaning or name of something if it meets characteristics previously established to them. If a pineapple meets the characteristics of an apple (round, with leaves) then the baby is more likely to call the apple, a pineapple. It also means that, human beings' habits are the results of reinforcement and rewards when they are performing or having good behavior.

Nevertheless, the acquisition of a second language is more difficult because human beings confuse words, since they are learning with what they already know as "right" from the native language. Learning a second language requires that individuals change their mindset about the rules of language and vocabulary. Speaking should be the most important skill to be learned because other skills stem from it. Infants learn speaking first and then develop other aspects of the language, such as writing and reading as they advance in the learning process. So, speaking should be the skill professors practice the most in classrooms with students, since that will be the beginning of a successful language process. Coming from a Hispanic background, learning English can be confusing and daunting because of the exchange in possessive objects. For example, in English one would say "my father's car" and in Spanish they would say "the car of my father (translated from Spanish of course)." The order of the words shifts in that manner, making it more difficult to learn the new language.

The behaviorist theory clearly shows that language learning is the result of stimulus and response. The idea of that theory is that human beings can be stimulated at the very beginning by their professors in school, when they are learning the second language. That is why, teachers must be prepared when teaching in classes. It includes, knowledge of the contents, good pronunciation, and correct grammatical words when speaking. Students interact within the

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professors' environment, so if teachers are not prepared on how to introduce each content the students are not going to acquire the knowledge as it must be. In this case, behavior transmitted by professors towards students in classes will have great value in the students' learning process. If students have enough practice and learn the rules of a language correctly, then students will start acting on their own learning process by speaking and producing the language with confidence.

Another vital point to note is that teachers must let students' parents know that they have the obligation to correct their children when making speaking errors. Those errors could be related to grammar structures and pronunciation. The behaviorist theory from the psychologist Burrhus Frederic Skinner showed how positive and negative reinforcement have vital elements on the students' learning process. Positive reinforcement helps increase the students' motivation and strengthens, which are the desired responses because when students receive good feedback and motivation, they feel encouraged and with much more energy to continue learning more.

However, negative reinforcement can produce the opposite in the students' learning process. If students only get negative reinforcement from their learning environment, then they might reduce the desire of response. Thus, the learning process will take a lot more to be acquired well. Consequently, it is very important to influence the student's learning by breaking down a learning task into small pieces (from general to specific). That is the way that deductive reasoning (strategy used in this investigation) works and how it will be applied by the students. In each specific task, students will start thinking from the general rule to the specific, until they are able to accomplish the task or the goal correctly. They will come up with answers to the problems at hand and make responsive decisions on their own during classes.

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The main point here is tracking students' behaviors when they are performing different tasks in classes when using the deductive reasoning strategy. During the process, the researcher will observe the students' responses, guide them when they need help and coordinate with students when they are not performing well. If students are struggling a lot during the process, the researcher and the teacher will make a plan to overcome the issue, as they are thinking ahead in order to help students acquire the second language smoothly and make students feel confidence.

2.1.2 Native Language Interference and Foreign Language Acquisition

Previous theories have shown the advantages that people have when acquiring a second language before the age of 3 years. Learning a second language makes it easier to pronounce and understand the meaning of L1 words accurately. Derakhshan, Ali, Karimi, and Elham (2015), determined that adults, as second language learners, need much more time to acquire a second language properly and most of them have troubles in their process, in the areas of phonology, grammar, and vocabulary because of habits they acquired from their native language and that they transfer to the second language. Learners end up producing errors that challenge the second language and that is called 'Interference.' In other words, the authors state that interference appears old habits from the first language are transferred in the acquisition process of the second language.

There are two types of transfer mentioned by the previous authors when acquiring a second or foreign language. Both, the positive and the negative transfer, have pros and cons. The positive transfer occurs when the first language can facilitate the acquisition of the second language, but the negative transfer takes place when the first language interferes with the second language and has negative effects on it. It is noticeable that transfer can occur subconsciously.

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Most of the time learners try to apply their previous linguistic knowledge when practicing their second language. However, using and applying the first language's rules to the second language can make the learning process longer than just learning the second language on their own.

Phonetic (sound) properties of words that sound the same in both, the first and second language, negatively impact both languages equally. Meaning, learners can influence their native language, even if they are well-advanced in another language, and they can also attempt to reach fluency status in their second language, but they will always pronounce words differently than a native speaker. Learners have three options when this occurs, according to the merge hypothesis stated by Flege (2005), previous head of the Department of Speech and Hearing Sciences at University of Alabama. They can either keep the characteristics of their native language and focus more on that, lose their first language and focus more on the target language, or distribute the capabilities of pronunciation equally between both languages.

The researcher of the investigation disagreed with that hypothesis because second language learners can be powerful in both languages (L1-L2), with the exception of their accent. Learners can be quite prolific in the procedural aspects of any language depending on how they learned it. That is why it is important for teachers to develop creative ways of presenting the information to students. It is also important that teachers have a good basis of knowledge themselves. For example, if a teacher struggles with the meanings of certain words in the target language, he or she will not be able to transmit those meanings to the students.

Being a native speaker of a language does not mean that a person will not have problems or mistakes in his or her speaking. The second language learner may have a better understanding of the language rules and may speak the language more as it is meant to be. Unfortunately, culture brings up several issues because the younger generations tend to use more coined words

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or words that have been developed in their social circles. The younger generation does not stick to the language rules completely, but variate and innovate them.

Perfection of a language should be based on how fluid one is. Fluency is defined as being able to speak and write a language easily. An accent, on the other hand, is a mode of pronunciation, or a “song added to the language.” In 2011, the Arizona Board of Education worked on determining if a teacher’s accent affects his or her ability to teach and if that teacher is considered “fluent” in the language when pronouncing words. For example, if a teacher pronounces ‘lebel’s’ instead of ‘levels,’ does it mean that he or she is not fluent? The Arizona Department of Education ruled to exclude several teachers from performing their roles if they deemed their spoken English to be heavily accented or ungrammatical. TESOL (Teaching English to Speakers of Other Languages) International Organization responded to the Arizona Department of Education stating that they were unfairly discriminating against non-native English speakers and that non-native English speakers should not be singled out because of their native language or evaluated on unspecified standards of language (TESOL Responds to Arizona Teacher English Fluency Initiative, 2011).

It is not necessary to search for the “perfect accent” because if someone tries to do that, they will never find it. When speaking any language, a person is bound to have a different form of speaking, that being one that is generated from colloquialism. However, when looking for attributes required in speaking a language it is good to look for accuracy, speed, and lack of errors, or, if there are errors, quick correction. These factors are most likely to occur when the language is learned from an early age, since the brain is more plastic (capable of being molded) when you are at a young age. Older adults will not be able to learn the language so well, and if they do learn, they will have mannerisms from their native tongue that affect the second

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language. This is proven by the concept of interlanguage that was first introduced by Selinker (1972), American linguistic.

Interlanguage is the language that is between learner's native language and second language. It is an unfinished product because they are not completely advanced in the second language, yet. He categorized interlanguage into two different linguist systems. Selinker (1972) affirmed that there is a huge difference in the acquisition of the target language between a children and an adult. Adults who are second-language learners hardly succeed in acquiring the use of the target language. However, children have the facility to acquire it as if it is their native language.

2.1.3 Errors Analysis

Errors and mistakes are always shown when learning a second language. No matter the level of English, errors and mistakes are going to be there during the learning process. That is the way human beings learn in life. Feltsen (2009), a student at Mid Sweden University, explained the differences that exist between them. Errors are considered the lack of knowledge people have when performing a task, while mistakes are shown when people fail to perform tasks. He affirmed that errors can be fixed by learning the rules of the task and understanding them very well in order to avoid making errors. Mistakes are overcome when that knowledge is earned.

A transfer error occurs when a language learner attempts to communicate in the target language using grammar from the native tongue or first language. For example, someone may try to say "Fui a las cataratas (I went to the waterfalls)" translating from Spanish to English, but may not have the knowledge to complete the sentence and use the word "catarrata," thinking it is the same in English. The person will attempt to say in English "I went to the catarratas" and,

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therefore, draw up confusion in the conversation. That is why transfer errors happen when learning a second language because there are over-extensions of analogy problems, transfer of structure, that the second language forms have similarities to native language (Interlingual Errors), and incorrectly think of items within the target language (Intralingual Errors).

Feltsen gave an example of a type of error in language learning called Transfer Error, also theorized by Lott (1983). Some learners misuse an article because it shares similar features in both languages. A problem that occurs is when learners utilize a feature from the first language and incorporate it in the second language. Learners also tend to use words when they have different or multiple meanings in the original language. For example, some Spanish speakers use wrongly the word “actually” in English because they think that it means “actualmente” (at the current moment), as in Spanish.

On the other hand, Feltsen (2009) categorized errors in five different types such as: grammar error, words missing, morpheme errors, spelling words, and finally word order. Grammar errors are defined as errors in spelling, wrong application of grammar tenses, and phrases that are not related to what learners intend to say. For example, some common grammar errors are “it is not good to go to the bed late” instead of “it is not good to go to bed late” or “it was tough decision to make” instead of “it was a tough decision to make.” On the other hand, word missing refers to words that learners skip when they speak or write. For example, “Eva cook very well” it is observable that learner missed the ‘s’ in the verb ‘cook;’ another example is, “Sammy want see her mom right now” the preposition ‘to’ is missing in that sentence. Morpheme is defined as small words that can still carry out meaning. For example, the word “dog” is only one morpheme, but if you add an ‘s’ there will be two morphemes “dogs.” Morpheme errors in speaking are those words that learners do not pronounce for example, the

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-ed endings or 't'-'d' at the end of some words. Finally, the spelling and word order errors are the most common errors second language learners make. Spelling and word order are defined as the proper way to write a word or using the correct order of letters. Some spelling errors are when learners do not double consonants in some words for example "beginer" instead of "beginner" or "offerring" instead of "offering."

The idea was to focus on students' mistakes. Therefore, it was better to divide the parts in order of most importance and pay more attention to those with highest priority. As a conclusion, he deduced that a large percentage of errors students make are grammatical. Some of those errors that occur the most are errors in apostrophe use and use of the wrong personal pronouns. Examples of those errors were: "His name is Tommy. His is 2 years old, Shi name is Filisia, I do not know." Those were clear examples where students missed apostrophes and personal pronouns. Students on 12 and 13 ages group are more likely to write exactly in the way they would speak. Because if they think a word sounds a certain way, they will spell it out the same. Another case the investigator Feltsen stated, was the group with students ages 16 through 18. There were many errors in grammar and words missing. Some of those errors were: use of unnecessary words in a sentence, use of the wrong word, and failing to use the correct articles, as well as writing sentences that did not make sense. The most common error would be to use the wrong verb in the sentence. The reason for this might be because the information presented by the student is at a higher level than someone in the age range of 9 and 10. Another reason would be that the students lacked practice in the language and were not prepared. For example, a lot of students at their teen years use computers to correct their mistakes. They end up relying on external devices to correct the mistakes, instead of learning to do it by themselves.

2.1.4 Students' Autonomy / Constructivist theory

The researcher of the investigation intends to incorporate different tasks with the idea of getting students to develop their own autonomy, because students are more likely to become autonomous when the learning process is interesting, as they do not feel school activities to be an obligation. So, the freedom that these tasks provide will lead students to believe in their own ability or capacity. "While autonomy is encouraged by curricula, it is often an ideal that seems difficult to achieve in everyday language classes" (Cruaud, 2018, vol. 21). Professors see it difficult to be accomplished because they just want to introduce the topics by writing on boards and do not pay much attention if students are understanding. However, performing activities or tasks in the form of games in classes will help students to better understand the goals to be achieved and pay more attention to their actions.

By assessing tasks and communicating more with classmates, students are opened to accomplishing the tasks in a successful way to keep focused and contributing to their own ideas. When students are responsible for their own learning, they tend to work better in class than others. That is why when they are directly involved in the planning of activity and exercising control, their confidence grows. As students tend to improve their learning process first in their mind and also by physical actions (hands-on), they reach a point where they are finally capable to review their own learning for effectiveness. Students start learning to benefit their own life and not just to pass exams. Students' autonomy explains the importance of teaching students how to develop their own learning method.

Learning does not only imply learning subjects or lessons in class, but also understanding them. "The variability of the relationship between the students' perceived autonomy support and the students' autonomy will depend on teaching quality" (León, Medina-Garrido and Ortega,

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2018, pp. 219). So teachers can develop an autonomy style in their classes, they must make sure their activities are well structured and managed. For example, by explaining step by step the instructions of every activity and implementing the adequate level of difficulty, as well as, by taking into consideration the students' interests and preferences and a good interaction between professors and students will improve the lesson and help students to feel better in their learning process.

The constructivist theory tries to implement a new model of learning that consists of making the learning process easier by giving students the opportunity to interact with sensory data. By doing so, they are capable to construct their own way of thinking. The philosopher Jean Piaget proposed, in this constructivist theory, that the most important point is to teach learners how to acquire knowledge and learn through their experiences. Piaget's theory includes learning formulas, teaching methods, and education reform. Two great factors mentioned by the philosopher regarding how learners develop their knowledge are accommodation and assimilation.

Assimilation means that individuals adopt new experiences, as this helps learners to reevaluate the information that was misunderstood, develop new points of view, reconsider what is important, and adjust their perceptions. Meanwhile, accommodation consists of replacing new experiences in their mental capacity. The teacher's role in this theory is the one of facilitators, mentors, or consultants in order to let students to be involved. That will be the way the researcher will work with students in class. For example, instead of telling students the complete information or content, the researcher must keep conversations constant with students, so they can be open with their needs and learning process. Instead of the researcher sticking to a book, he or she will guide them and allow them to come to their own conclusion.

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This action or way of teaching will train students to be critical thinkers. That is exactly the way the theory works. Piaget also mentioned some strategies that work very well in class. Those strategies are modified and will be used by the researcher in this investigation. For example, students should work together most of the time, so they can answer and ask questions. The next strategy consists of using a student as an “expert” or role model in one specific topic and let him or her teach it to the class. The last strategy is pairing students and letting them research a controversial topic and present it to the class using a power point presentation.

2.1.6 Cognitive Theory

The cognitive theory, as developed by Piaget in the mid-twentieth century, centers on how people process and interpret information. Piaget’s study particularly focused on how children developed intellectually throughout childhood and how children think differently from adults. By using this system of cognitive management, students are able to keep and use information in the brain longer. The types of information that are processed under this theory are perception, attention, language, memory, thinking, and consciousness (Sincero, 2011). In the present investigation the focus is on the aspect of language learning.

The theory also studies where knowledge comes from and how people come to know. Some of the strategies used within this theory in the classroom are mental imagery, as the students are asked to tell a story based on a picture; mnemonic devices, as students are asked to fill in the blanks according to the lyrics of a song; and the key word method, such as when students were asked to do a crossword puzzle. During the crossword students are given a definition of a word and are to make an educated guess about what the correct word is. These tasks are important because of the exposure to different learning methods. The students are encouraged to break down information using their own perception instead of memorizing.

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The cognitive theory also focuses on an individual's thoughts as to determine of his or her emotions and behaviors and, therefore, his/her personality. For example, this means that by changing your thoughts you can change the outcome of any situation. The mental or internal events observed in this theory are called 'cognitions' and can be further separated into irrational and rational structures. These structures, what the students already know, are then used as the bases to process new information (Anastasia for Cleverism Magazine, 2018). In other words, the researcher uses the theory to help students to form their own opinions and a set of rules to guide them in their language learning. A disadvantage, however, is that it is very reliant on interpretation. An advantage is that students become independent thinkers. This theory is applied through the implementation of the three tasks where students are inspired to use information sub ministered by their classmates, and process it in order to reach a conclusion. Students also must explain why they come up with their answer and try to support their points of view.

The cognitive theory is important to the classroom setting because it shows the importance of every individual's opinion, generates new ideas, and allows for students' cooperation. It is used to determine how students' thoughts come about and how they are different from each other. The goal of the theory is to explain the ways students develop their reasoning and think using hypotheses.

2.1.7 Meta-cognition Theory

One of the most common problems in second language acquisition is that students start to rely on their habits or patterns to from their native language and make assumptions that the new language, they are learning, will be the same way. In order to avoid such an obstacle, it is

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important for students to be able to think on their own without relying on any other information source. That is why “thinking about thinking” or meta cognition is important in learning a second language, but also in all aspects of life.

Jean Piaget and John Flavell are remarkable researchers of this theory. In their research they explained that meta-cognition works as a process for selecting, revising, and evaluating cognitive tasks, goals, and strategies on how human beings manipulate the information acquired from different topics. This can happen either consciously or sub-consciously without the individual being aware of it. There are three factors that may affect how the meta-cognition process works: the person’s thinking about him/herself, the task or activity being pursued, and the strategy or method to be used to accomplish that task. For example, in the personal category, how an individual feels emotionally is very important because of the positive versus the negative influence on their performance. If individuals feel that they cannot accomplish a goal, then they will be compromised. A task can affect an individual’s thinking because it depends on how much information about the task or activity is available and whether that information is useful or not. The strategy factor, in meta-cognitive thinking, is when an individual determines a goal or objective and realizes ways or routes to achieve it. For instance, students’ meta-cognitive awareness about these three factors can play an important role in general problem solving.

It can be noticeable that problem solving stems from an individual’s convictions, abilities, and standards. This means a lot because the age of a learner can affect meta-cognitive thinking; for example, young children, sometimes, have difficulty when thinking introspectively and reflecting on what they are doing, while older generations are more aware of their own thinking. Thus, when individuals are experiencing something new or that is not common, they

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pay more attention to it and try to understand it and deduct a conclusion. This would mean that certain tasks with those characteristics would require deeper effort than others.

In order to perform better, individuals must come up with their own system of thinking within the meta-cognitive process. On the other hand, familiar activity is less likely to provoke in-depth meta-cognitive thinking because the individual will already have the information obtained previously. Success in a given task or lack thereof can affect how an individual will view that same activity in the future. It may mean that the individual is either encouraged or discouraged by future efforts. That is why the role that the meta-cognitive strategy plays is to organize students' cognitive processes.

This investigation intends that with this theory students end up being aware of their own thinking and to encourage them to summarize the points they are the strongest in and to find other ways to review the information they are lacking. The importance of a goal or task affects meta-cognitive thinking because it triggers emotional response. For example, if the task is more urgent or painful, it will require a definite answer more quickly. However, the pressure involved in the task will negatively affect the way one is trying to come up with a conclusion. That is why meta-cognitive strategy is used in overcoming blocks in thinking, as it is a mechanism used to make a generalization about a topic and re-evaluating it to determine if it is satisfactory.

It is important to teach students since early childhood the meta-cognitive process because they will be able to solve problems easily and they will be more independent in their everyday life. They will also be able to compare their own and others' thinking. Children must learn that there are many possible responses to different scenarios, but that certain responses will result in a better outcome. For example, a student in high school may have a multiple-choice test and the first two answers are 30% and 40% applicable to the question and the other two answers are only

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15% each. The student should be able to determine which one best fits the characteristics of the question. The student might do this by getting rid of the ones that appear to be the least relevant.

The advantages of doing that are that students are forced to use context in certain situations and consider similarities and previous experience and knowledge. Some of the disadvantages are that students, who are very sheltered or do not have a strong educational background, will suffer because they do not have any source to pull similarities from. In practice, the aim is to develop students' independence through pushing them to overcome obstacles, so they can be able to encounter solutions to any problems.

In the classroom, the researcher, who also plays the role of teacher, will give the general instruction to students and after that students are going to start working by themselves with free expression, by applying the information. Students will have the teacher's assistance, but the majority of the work in class is going to be done independently. Firstly, it is necessary to explain to students what the meta-cognitive process entails. Secondly, it is important to know what the students think of the subject and to give them the opportunity to ask questions or display any concerns. Thirdly, the teacher is going to detail the content, so that the students have a clear understanding prior to do it on their own. In order to determine the students' level of cognitive thinking, they have to ask a set of self-assessment questions, such as if they are focusing or learning just to pass the tests or learning for their own benefit, if they are just memorizing instead of understanding what they are learning, if they take the necessary time to practice and study, and whether they are in control of their own mindset or panic when they do not understand. As an added benefit to students, it is good for teachers to offer students a glimpse into their own experiences, especially in the area of language learning and speaking. It is also important to use

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visual assistance such as maps, images, ideas, and words, to allow the students to get an idea of the “larger picture.”

A similar process is used in deductive reasoning. It is also important that the researcher (teacher) has a method of assessment of the changes in the students’ learning. Some of the tools that he or she can use are reviews with students about the topic at the end of each lesson and clarify doubts they might have. The researcher can also bring to light what areas they have strengths in by asking the students what they did not understand and what they think could be the best solution for understanding and having students to create possible scenarios and questions to the upcoming test. This helps teachers to focus on students’ strengths and weaknesses. For example, the teacher can later perform a Strengths Weaknesses Opportunities and Threats (SWOT) analysis of the students, which can be used as a strategy to determine changes in students’ knowledge and what they need help with.

In conclusion, the conditions needed for proper meta-cognitive process are a clear understanding of the individual’s level of learning, conditions that might challenge them, opportunities for growth and areas where change may be needed. It is also good to get the students feeling comfortable with the setting in which they are learning and allow them to contribute to the way the topic is taught.

2.1.8 Deductive Reasoning

Deductive reasoning is a sub-level of meta-cognitive thinking, where a person processes a general statement or theory and breaks it down to apply it to certain or specific situations. In short, deductive reasoning goes from the “general to the specific.” It means that students will test their knowledge from the most general to the specific by providing good arguments (a set of

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reasons to uphold or justify a conclusion). A valid argument with true premises (statements within the argument that support the conclusion) is considered “sound,” meaning that the argument is reasonable and that its premises are true. To determine whether an argument is valid or not, there can be used several methods, including coming up with a counterexample, where the conclusion is false, even though the premises may be true. If people are sure that the premises are true, then they have to accept the conclusion.

A logical system needs a set of principles or inferences because logic is not random or out of order. Logical thinking is systematic, and people draw conclusions from the assumptions initially made. It does not add any new information to what is already assumed, but it states the consequences. For example, one may say that all dogs have hair, and that his or her Chow Chow has hair. Therefore, the Chow Chow is a dog because it has hair. This may or may not be true, but it does not exempt the validity of the statement. One could also say; all remote controls are black; this is a black object, therefore it is a remote control. Even though that is not a true or a correct conclusion (because someone’s remote might be another color or it may not be a remote at all), the statement is still valid.

Independent of the complexity of the task, logical errors will always exist. Deductive reasoning is used to reduce logical errors, but not to get rid of them entirely. Some have thought that logical thinking is something that you are born with and cannot be changed through the environment and external factors. That is why the investigation will focus on improving an individual’s way of thinking (an individual’s linguistic habit) and not on changing it. Clark, a professor of psychology at Stanford University, proposed that sentences are broken down into constituents or parts, of which he defined to be a group of words that are designed to be replaced by a single word without affecting the rest of the sentence (Evans, 1982). The propositions

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within the sentence structure are organized in order of rank or from the highest to the lowest importance.

In a conversation in a foreign language, the listener is usually able to break down the parts of the sentence in order to develop understanding. Some ideas may also be achieved in an abstract manner through using mental imagery; which may be directly linked to cognitive processes. Deductive reasoning is also used in language to verify whether a sentence is true or false. This is done by comparing the representation of two or more premises and forming a conclusion. For example, an individual might be asked what image represents the sentence and whether they correlate. This can also be done via an individual's own memory. The individual may have to recall old knowledge to determine the validity. Put simply, reasoning has two specific stages. The first is where the information is presented and the second is when the information is processed. However, reasoning is not always at the forefront of the mind, the individual does not have to constantly think about the steps. The result comes subconsciously, just as breathing. Another sub-level of deduction is syllogistic reasoning, where there are two premises involved instead of just one and a conclusion. For example, no b is c, some a are b; therefore, some a are not c. The problem is having to decide whether the syllogism is valid.

The main purpose of rationalism is to determine whether a person is using reason when confronted with a logical task. Behavior can be both, logical and non-logical in nature. This is determined by response; in other words, it is biased or pays attention to unimportant factors. It is impossible for the premises to be true and the conclusion to be false. Deductive argument guarantees that the conclusion is true or accurate no matter that other premises are added to the argument, since the premises will always support the conclusion. Smedsrud (1970), professor of psychology at University of Oslo, proposed that there is a correlative relationship between

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reasoning and logic. For example, if someone is making a correct conclusion about a topic/problem, people can assume they understand the problem and the rationality behind it. However, it is important to note that reasoning and logic cannot be viewed separately. In opposition, there is the inductive reasoning process, which does not guarantee the conclusion to be true. Inductive reasoning is when the individual makes a general statement that stems from specific occurrences. For example, one may say that his or her remote control is black, therefore all the remote controls (in the world) are black.

2.1.9 Speaking Skill

Speaking is a productive skill that allows to express one's own feelings and inner thoughts. It is formed by words and/or sounds put together to form an understandable oral conversation. The speaking skill has immediate benefits and requires very little contemplation. People can understand better because there is little chance of confusion and it allows for explanation in further detail. Speaking requires at least one listener and the use of vocal cords and intonation in sound. For example, every individual will have a unique form of expression (voice).

As opposed to other language skills, speaking allows displaying clear thinking because individuals can support their ideas by explaining them in detail with more structure. A person can gain the attention of an audience and hold it until his or her idea is expressed completely. Having the structure of language, but the inability to speak makes the language useless; since, it does not matter if someone knows how to form a phrase but cannot express it. It seems that lack of correct pronunciation of words is an everyday constant issue for second language learners, because students rely on their first language most of the time when pronouncing words in English. That is why in this investigation the researcher plans to be focused on students'

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pronunciation when accomplishing tasks, so they can better comprehend when speaking the second language (English).

Speaking is the result of creative building of linguistic strings. To analyze different speaking types, helps students to get into the habit of understanding the conversation with a native speaker, who may be speaking very quickly. They also learn how to come up with appropriate responses by themselves in the second language and can perform well on different tasks. By following an instructor's plan of action, it becomes easy because they obey rules and learn how to retain information to apply later in the tasks. At the same time, it helps students to set instructions in the second language in their mind, avoiding the interference of their native language. After students perform the task, the teacher evaluates them by taking into consideration their pronunciation and fluency.

One of the disadvantages of such tasks is that it might be complicated for students to transfer what they are thinking into spoken format. That is why, the teacher needs to give students enough time to organize their ideas, so they and can be able to express themselves in a better way. Speaking requires constant interaction with an interlocutor or speaker because as much they practice the language becomes better. Students are engaged in a very specific and clear manner using appropriate discourse depending on what content they have each day in class. Some of the categories that can be used to test speaking are getting students to describe something physical, give instructions, provide an opinion, give direction based on available materials, etc. Another way might be to have them paraphrase. This consists of asking students to hear or read sentences and then reiterate them in their own words.

There are micro and macro skills that help the assessment of speaking. Both skills have different aspects and work individually. For example, micro skills work on the minute level of

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language, such as the breakdown of words (morphemes), combinations of words that go well together (collocation), and phrases. The micro level of language is important, since if there is no feedback, the smaller units of what someone is trying to communicate can cause a lack of meaning. Furthermore, micro skills accomplish practical functions, such as self-correction and clarifying the message. On the other hand, macro skills focus on the broader aspect of language such as fluency, discourse, function, style, and cohesion. The macro level is important because it connects ideas with what is being communicated. People can use verbal and non-verbal forms of communication and emphasize key points.

Teaching speaking does not only imply correcting grammar structures of the new language, but also the importance of their verbal communication. It is considerable to teach students the ability to present, perform, and persuade an audience with what they are trying to introduce or convince. These points are important because once they graduate from high school, most of them will enter a world of business and they must have the ability to develop conversation in front of others and be understood.

However, there is a huge difference between speaking and talking. Students in class have shown they know how to talk, but only a few of them know how to speak properly. That is why, it is essential that teachers are aware of recognizing the importance of teaching the art of speech. Speaking well enables us to feel more confidence and become more respectable (Palmer, 2011). People with a good verbal communication skill have more opportunities to grow professionally than people who do not. If speakers want the audience to be interested in what they are introducing, first they (the speakers) need to be interested in what they are saying. In order to build interest in the topic, the individual needs to build his or her knowledge through investigation and research, such as interviewing people with expertise in the area and

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experimenting. Also, for a topic to be interesting, the speaker has to benefit him or herself in some way. Great speakers tend to be passionate and to consider the audiences' concerns and emotions. In order to make the audience interested in a speech, individuals must make sure the listeners understand the meaning of what they are trying to explain.

According to the researcher's experience, speaking and listening are clearly the most difficult skills when learning a second language. Sometimes, professors do not realize how important those skills are for students and they just continue teaching the contents without taking into considerations other ways to reinforce those skills. Let us focus on the speaking skill, which it is the skill that most scares students once they have to start communicating with others. So, what can professors do to get rid of that fear that students have when learning a new language? The researcher's recommendation is practice. Practicing the language by speaking it every day will help students until they reach a peak in their confidence. Practicing the language means interacting with others. Making mistakes is good because when students are corrected, they will make the mistake again. It makes the speech more productive, if the audience knows that the speech was made specifically for them. For example, it is good to mention topics that the audience is familiar with, so that there is a good connection between the topic and audience's knowledge. Proper speakers only select the essential information to make the speech productive. It includes picking valuable sources, avoiding unnecessary phrases such as "you know," "like," "okay," "you know what I am saying?" "um." All those things can bore the audience and the speech can lose credibility.

A good organization of ideas will make the speech easier to follow. There are some basic structures mentioned by Palmer in his book that will help students organize information. Those are chronological, problem and solution, comparison and contrast, topical, geographical, and

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order of importance. For the purpose of this investigation, only two are taken into consideration in class because the researcher does not have a lot of time to develop all the speaking teaching techniques.

The chronological order is when the speech is organized in time from the oldest event taking place to the most recent. This is advantageous because students have a model to follow and a review of what happened since the beginning. The context is very important when explaining a topic because meaning will be different based on how variables interacted with each other during certain points in time. For example, racism was more of a prolific topic in the early 1900s than today and may have a bigger impact on audiences who lived during that era. When learning how to organize their thoughts and ideas in the correct order, students can develop a system of their own choosing.

The second structure is “problem and solution;” it means that students put the technique into practice when attempting to obtain solutions to different questions. First, the speaker needs to start by understanding who the audience is and what are their preferences, demographics, and backgrounds. By knowing this, the speaker can adapt the topic and avoid any negative reactions. It is also important for the speaker to note any feedback received in the process to make corrections. Many times, a speech does not need to follow a certain order, but the speaker will present a problem or issue to be addressed and then give the solution to it, or he or she may lead the audience to the solution through subtle hints. Disadvantages of this, however, are that the speech may lack meaning or influence and the audience will not always react positively. The solution is not always obvious, and the audience may sometimes need to process a lot of information. For example, the speaker may present a current issue that is in the news and may come up with satisfactory solutions that the audience can either support or refuse. Some of the

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advantages are that by performing speech in this manner, the speaker opens the possibility of discussion and enables the audience to have an input.

In order to help students overcoming poor pronunciation, the researcher plans to create different activities in class. For example; the first activity consists of stimulating students with simple repetition of words. Those complex words that students have been getting troubles with are going to be listed and at the end of each lesson the researcher will write them on the board and pronounce them with the students. In this way, when students hear the correct pronunciation, they will realize whether they are pronouncing well or not. They will then change the pronunciation to the proper one. The second activity works on speaking and listening at the same time; such activity is called “phone pass.” It is used to reinforce those skills because the students must follow directions. The activity consists of making two groups of five members each and having them pass on information dictated in secret by a leader in a line, from the first to the last member. If the information is wrong or not very close to the original message when it reaches the end, the group loses points and the best group gets points.

In the speaking process, usually there is a communicator and a listener, but only one is aware in a full extent of the topic being discussed. The role of the speaker is to capture the attention of the listener and get him or her to understand the topic and provide a direct response. The researcher of this investigation has ways to enhance the speaking skill that would be using credible sources of information, the students can be able to check their own mistakes, constant feedback, assigning roles and make an environment that is beneficial or conducive to growth. In order to acquire a second language, the speaking skill is very important because it allows students to put into practice the structural knowledge that is learned in the classroom. It means

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that students will be able to express their inner thoughts, make mistakes that are corrected simultaneously, and perfect the language through dialogue with another person.

The goal of speaking is to produce information that is convincing to an audience. The way the audience responds can directly help the speaker because they can learn new vocabulary or phrases, since they might have more detailed conversation and errors can be pointed out immediately by the listener.

Chapter III

Methodological Framework

This chapter is intended to provide an explanation of the research approach, research design, sources of information, and units of analysis, as well as the instruments used to obtain data in order to meet the investigation's objectives. It relates to obtaining accurate information and data from the beginning to the end of the investigation by using several means of comparison to determine the usefulness of the research method used. Furthermore, it lays out the steps the researcher will take to accomplish the goals set in place previously.

3.1 Research Approach

The research approach refers to and encompasses decisions about how the research itself is conceptualized, the subsequent conduct of a specific research project, and ultimately the type of contribution the research is intended to make to the development of knowledge in an area. For the purpose of this investigation, the qualitative research will be used. The qualitative approach is not only about "what" people think, but also "why" they think so (Adi Bhat, 2019). In other words, the qualitative research focuses on describing a phenomenon, attacking it, and providing results.

The phenomenon of this investigation is the interference of students' native language when learning and speaking a second language, in this case English. The researcher will attack it in order to diminish it. The use of deductive reasoning strategy in class is intended to overcome or diminish the interference of native language as much as possible. After applying the specific strategy, the researcher will provide results according to the behavior and reaction students had during the process.

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The results of this approach are descriptive (very specific and coherent) and provide advantages because the involvement is seen quite easily from the data obtained. The advantages of the qualitative research approach are that researchers obtain different forms of data rather than only one data source and participants can unwind by trusting the researcher and the information, as these are more communicative methods. The researcher can solve complex issues by breaking them down into meaningful inferences that are easily readable and understood by all. This approach collects data at “first sight” when participants are having difficulties in solving a problem. The qualitative data collection is non-numeric and helps researchers exploring how decisions are made and provide them with detailed insight. The data that is collected must be holistic and rich and findings are to emerge through careful analysis. It is inclusive and will be the main source of information in the investigation.

The qualitative approach will be used to collect information and data because the study will be dealing with people and every individual is unique and presents different challenges. Moreover, it will be useful in the investigation because its focus is communicative and descriptive because the researcher is able to write down exactly about the issues that are affecting the students. The aim of the investigation is to communicate with the participants and interact with them in order to reach a solution to the main problem, native language interference. Details are necessary because every minor evidence is essential, since they allow for comparison between two time periods (before and after), give the researcher a better understanding of the problem versus the solution, and bring supportive data to come up with the best answer or conclusion.

The study within classroom setting makes great use of the qualitative method of analysis because it allows the researcher to notice behaviors, emotions or feelings, if students are

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understanding, if there are any mistakes, and thus allows for correction of any problem that may arise. In addition, notes are taken during classroom sessions when the students are applying deductive reasoning. The qualitative method helps the researcher to realize if students are memorizing or relying on other people. It also shows if they use different sources of information and alternative ways to reach an answer.

3.2 Research Design

The research design of this thesis is an action research. It is an educational research that is mostly used to collect information, analyze it, create a strategy to improve it, and develop conclusions regarding the improvements. The action research design will focus on the issue of native language interference on students who are acquiring a second language. This issue will be improved by using the deductive reasoning strategy along with some specific speaking tasks to help students thinking on their own when speaking in the target language. The process of the action research design consists on the following.

First, the investigator selects a focus, which means selecting the topic. As mentioned previously, the topic is overcoming native language interference through the use of deductive reasoning. The researcher came to this topic due to her experience when learning a second language (English). The problem of growing up in a Hispanic country is that people get comfortable by speaking their native language instead of developing their second language whenever they have a chance. The researcher also noticed that Costa Rica is such a touristic country that it would be beneficial to learn how to speak the English language, as the majority of people coming to the country are American or speak English as their first language.

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Secondly, the researcher clarifies theories in order to recognize the values, beliefs, and theoretical perspectives that the investigation holds according to its focus. For example, behaviorist theory, meta-cognitive theory, and deductive reasoning all work together to stimulate students to come up with conclusions by using analysis to reach good results. Students are to recognize that by performing a good action, they are rewarded with a beneficial result and will repeat it. These theories were picked due to their focus on independence and motivation. Students perform better when they are in a good environment and when they are stimulated with positive reinforcement. When a student is motivated, he or she is more likely to act independently and venture into new territory. The researcher has noticed that students tend to get dis-motivated when there is not a fully committed teacher. The researcher aims to stimulate students via continued explanation, practice, and giving feedback to create a healthy environment. When students perform well, they should receive praise for their accomplishment and feel appreciated; thus, they will want to work harder when this happens.

Identifying research questions is the third step to guide the study. The research question for the investigation is, “how can deductive reasoning strategy be used to help eighth graders overcome native language interference?” The reason this research question was chosen was because of the need of finding out how students can avoid the challenges of learning the English language. The reason was also that it requires no changes to the content students learn, but it only influences the more efficient use of what knowledge they already have.

After that, the investigator will collect data. In order to collect the best data, it is important to make sure that the information collected is accurate and reliable. That is why, it is beneficial to use the best sources. The researcher plans on collecting data through the consistent observation of the students’ behaviors. The fifth step is about the analysis of data. Two essential

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questions are proposed to acquire a better understanding of the phenomenon of the study; the first one is “what is the story told by these data?” and the second one is “why did the story turn out this way?” The researcher will use the qualitative data collected through an observation to understand why the negative interference is occurring and what can be done to fix it. This will be done by taking detailed notes since the beginning about the factors that are affecting the students such as their home environment, influence of classmates, and degree of motivation coming from the teacher. An analysis of this information will be done once a week.

Finally, the two last steps are reporting results and taking informed action. They consist of gaining accurate and reliable data when explaining the phenomenon. The advantages of using an action research are that teachers enhance their motivation and efficacy, meeting the needs of a diverse student body and achieving success in a standard-based system. The researcher uses the information gained to reach a conclusion and determine whether the strategy is improving the students’ conducts. The information is also used to give recommendations and commentaries to help future researchers and professors.

3.3 Information Sources

The sources of information are the means by which information is obtained for various purposes: educational, research, and others. Sources of information can be precise, improvised, written, oral or multimedia. There are three main sources of information which are: primary, secondary and tertiary.

An article by the University of Illinois (2005-2006) explained that primary sources are archives created by the viewers or first archivist of the events at the time they occurred. This means that those individuals were present at the time the event happened. Primary sources

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include direct or experiential accounts that were documented later, such as personal records showing knowledge of the witnesses or participants. Examples of these are letters, emails, diaries, photographs and daily planners. The sources may also include literary manuscripts, autobiographies, vital records, oral histories, legal documents, speeches, and government documents.

The primary sources of this investigation are two books written by different authors. The first book is “Well Spoken-Teaching Speaking to All Students” by Erik Palmer. This book will be a great source of information for the investigation because it discusses the meaning of speech, how to teach it, and contains practical ideas for delivery. The second book is “The Psychology of Deductive Reasoning” by Jonathan St.B.T. Evans and from this book only three parts of it will be taken into consideration. The first one will be language comprehension, the learning processes and finally the nature of human thought.

The institution where the investigation will be done is Jorge Volio Jimenez Bilingual High School and is considered a primary source of information in the research. It is a private bilingual secondary institute that forms part of a cooperation together with Colegio Universitario de Cartago (CUC). Both institutions are located on the same campus, but in different buildings. The high school is part of a cooperative, providing scholarships to people without enough income and the necessary capacity to success in life. Equal opportunities and accessibility are promoted among the students in a safe social environment at this High School. They provide attention and academic monitoring by teachers of students, with the formation of classes with a maximum of 20 students. The academics offer an educational management of values and cooperative principles.

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The high school has a total of three hundred students and the English department is divided according to the level of English ability. Before joining the school, students must perform an English test. It is a mandatory test supervised by the language coordinator of the institution. Depending on the score the students get on the English test, they will be accommodated in their respective group. They are to follow the scaffolding process, which is from the bottom to the top sections of English level. Beginners have a low level of English and are named Freshmen. Intermediate students have a medium level of English, they can keep a conversation in English with minimal errors and are named the Transition group. The last English group are called Juniors and are very advanced. The majority of these students are in tenth or eleventh grade. Besides the four skills that the other groups have (reading, writing, listening and speaking) they also are proficient in literature. All students have different exams with four of the skills. The English department works with the test of English for International Communication (TOEIC). It is an English language test designed specifically to measure the everyday English skills of people and provides a grade according to the degree of ability. That test is done before the students graduate from the high school with the purpose of helping students to get better opportunities when looking for jobs. The aim of the institution is to prepare students to get their highest grade on the test.

The participants of this investigation, another primary source, are the students of eighth grade, who are around the ages of thirteen and fourteen. They are a transition group, which means the students have an intermediate level of English. Students understand the language very well and can keep a fluid conversation in English with only minor mistakes. The students are very smart, active, and willing to participate during the English lessons. Most of them have been in private schools before attending this high school. They show a great interest and desire to

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learn English as much as possible. There are students who have American parents, who make the learning process easier. Even though they understand English very well, they still need improvement in some area. This is a major indication and shows that learning a language is independent from the family background. Even if their parents are American, there is a need to improve their English language skills.

On the other hand, secondary sources of information are those that were created later by someone who did not meet the immediate event or was not present there (University of Illinois, 2005-2006). Experts recommend using sources published most recently and not too many years ago. Secondary sources examine, explain, assess, and incorporate primary information, but are considered less reliable. Some secondary sources are bibliographies, biographical works, commentaries, criticisms, conference proceedings, essays or reviews, histories, literary criticism such as journal articles, magazine and newspaper articles, etc.

In this thesis, five theories from different experts are used in order to develop the study from their experiences. The first theory is “Meta-cognition” by John Flavell (1976), but only two specific areas of this theory will be incorporated in the present study. The first area is meta cognitive aspects of problem solving and the second area is meta cognition and cognitive monitoring. The second theory is “Behaviorist” by Burrhus Frederic Skinner and for this investigation only positive or negative reinforcement will be taken into consideration. The third theory is “Merge Hypothesis” by James Emil Flege (2005), previous head of the Department of Speech and Hearing Sciences at University of Alabama. This theory proposes that second language learners always arrange influences from their native language even if they are advanced. The three options were developed to deal with this issue and balance the negative versus positive effects on the capacity to learn. The fourth theory, “Errors Analysis” was a thesis

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done by Patrik Feltsen, a student of Humanities at Mid Sweden University. He proposed that language acquisition errors can be fixed when a learner obtains knowledge about the rules of the task and knows them very well. The fifth theory, “Students Autonomy and Constructivism theory.” They explain the importance of teaching students contents not only to pass exams, but also for the real world. In addition, it is provided data on how students can build their own hypothesis according to previous The last theory is “Cognitive Theory” by Jean Piaget (1936) and speaks of the way information comes about and how individuals perceive and process it.

The tertiary source presents summaries or condensed versions of materials, usually with references back to the primary and/or secondary sources. Some tertiary sources types are almanacs, abstracts, dictionaries, encyclopedias, handbooks, magazines, thesis, articles, etc. The tertiary source of this investigation includes a thesis and an article. The first thesis mentioned is about “deductive reasoning” by Jonathan St.B.T. Evans. Three parts were considered relevant to support this investigation. The first part is language comprehension; second, the nature of human thought; and the third, learning processes. There is an article about “speaking skill” that talks about the importance of speaking when learning a second language, it explains how to teach speaking in class and also mentions two extras skills that are important in the learning process which are micro and macro skills.

3.4 Analysis Categories

Analysis categories correspond to the major or representative entities of what will be the specific objects of study and refer to what or who is the object of interest in the investigation.

The objects of interest, and what the study wants to find a solution for, are students who are having problems acquiring the second language due to their native language interference and the

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lack of deductive reasoning. This is especially observed when they attempt to produce the target language through speaking.

Deductive reasoning is defined as reaching a logical conclusion in a subject when analyzing information from the general to the specific, by reaching a theory and testing it through observation repeatedly. Deductive reasoning is considered one of the most important skills for life, since it allows human beings to take information from one or two sources and then make a logical inference. In other words, deductive reasoning happens when true statements develop a true and a valid conclusion. For example, if the statements are true the conclusion must be true, as well.

Native language speakers are people who have spoken a specific language since they were a baby, rather than having learned it while growing up or as an adult. The acquisition of the native language is natural, which means that individuals acquired it at the early stage of child's cognitive development. Children subconsciously process and develop the linguistic knowledge of the setting and are unaware of any grammatical rules. The native language structure is acquired even before individuals start reading or writing because in their early childhood, they already had an extensive vocabulary.

Target Language is a language other than one's native language that is being studied as a second or third language or being translated into. It takes time to learn it because it was not acquired since early childhood. The target language learners gain the ability to understand that the language is not only an object of study, but a means for conducting work in the classroom. Teaching a target language needs to be constantly supervised in classes in order to encourage students to keep producing it. Relying too much on a first language can lead to in-motivation in understanding the target language.

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Native Language Interference is when a first language appears as people are acquiring a target language. That person confuses or mixes some words from the L1 to L2 and it makes it difficult for him or her to learn the language properly. Confusion comes as a result when speaking, writing, reading, and listening the target language. The purpose of this study is helping students overcome that issue when they are first learning the second language. This will happen by teaching them how to apply the deductive reasoning process when the native language interferes in their learning process.

Speaking is a process that constructs meaning by producing, receiving, and processing information in specific situations. The importance of the speaking skill is wide for learners of any language. Human beings use language for a variety of situations in their everyday life and they are bound to speak it correctly and effectively in order to be understood by others. The aim is helping learners of a second language be able to communicate properly and efficiently without the gap of their native language interference.

Speaking tasks are human activities that consist on doing something specifically in order to produce speech. Tasks are pieces of work that need to be done and require interaction; it could be in partners or in small groups. For the purpose of this study, speaking tasks are going to be taken into consideration in order to accomplish the specific objectives of the investigation. Tasks characteristics are comprised in five parts which are: setting, rubric, input, expected response and relationship between expected response, and input.

Meta-cognition is the knowledge people have of their own cognitive process. It involves self-regulation and self-reflection because it is the foundation for thinking through problems. Metacognition is the ability human beings have in controlling their thinking process such as organizing, monitoring, and adapting. It is also reflected upon the tasks or processes people

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assume. The term “Meta” means “beyond” that is why it is considered part of the upper level of cognition, “thinking about thinking.” Meta-cognition allows for the realization of the ability to think on one’s own and of strengths and weaknesses.

Students’ autonomy is when students take more responsibility over their own learning process. It is also an instructional approach where students’ ambitions, goals, passions, and choices are taken into consideration when planning a lesson. Various supporting articles for this indicate that learning could be improved if this is taken into consideration. They learn to be independent when making decisions. Lesson plans are better adapted to the students’ needs than when teachers have complete control. Autonomy allows for discussion and debate in education.

3.5 Data Collection Instruments

For the purpose of this investigation there are three instruments to accomplish the aim of the research design. The instruments are an interview, an observation checklist, and a rubric. The interview is used to determine the level of native language interference students have when speaking English. Through the observation checklist, the researcher can analyze how well students perform when applying deductive reasoning in their learning process. Moreover, the rubric, in this case, will evaluate students when they are performing a speech about two fictional news they must create. With the instruments, the researcher can figure out if the strategy used, with the idea of helping students overcoming their native language interference, works well or not for this specific area.

3.5.1 Interview

The first objective is to detect factors that cause native language interference when speaking English and there will be one specific instrument to determine the causes. The type of

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interview used for this investigation is the semi-structured, which consists on allowing the interviewee (students) to leave the scheme proposed by the interviewer; however, at the same time, the structure created is used. The participants will have the right to explain what they consider important or necessary to mention in their answers related to each question.

For this investigation the interview will be divided in two sections. The first section is five questions about students' personal information for the researcher to get to know their backgrounds and the population itself. In this part, the students have the right to explain in detail every single answer for each question. The second section consists of seven questions with the purpose of detecting the native language interference when students speak English. The questions are based on the topic of false cognates and students will have three or four options to pick, only one or two answers in case they consider necessary. The interview will be done outside the classroom individually with the researcher. The amount of time given for each answer is one minute. Every answer provided by the students will be written by the researcher in her notebook to be analyzed later on. Both sections are done with the purpose of determining how much the native language interferes when students speak English.

The second interview will be done on June 27th, 2019. This interview will be done with the whole group and the researcher intends to last no more than thirty minutes. It requires that students respond in their target language to some questions provided by the teacher. The questions will be about false cognates just as those questions that were used before, but it will be asked to the group in general. With every answer provided, eighth graders will have to explain why he/she picked that answer and why he/she thinks it is correct. In other words, students will have to justify their answers with a clear argument. This second interview will analyze how well students use DRS and their capacity to come up with a conclusion right away.

3.5.2 Observation checklist

Observation checklist is the act of looking closely at one thing to assimilate in detail what is being researched. There are many types of observation; however, the structured observation is the one used for this investigation. The observer is to take notes, record, and observe factors that are causing native language interference and it will be noticed when students are performing speaking tasks. The aim of the observation checklist is to see how well the students perform when applying the deductive reasoning strategy in speaking tasks, how well students unfold with the topic, and if they already learned what the deductive reasoning strategy is and how to apply it.

Before the observation checklist, the researcher will first introduce the topic of deductive reasoning with a power point presentation to let students understand how the strategy works and how it can be used. After the explanation and clarification of doubts, a brief explanation of the first task will be shown to students. The researcher will start applying the observation checklist while students perform the first task “what am I?” which will be carried out on June 17th, 2019.

The second observation checklist will be applied for the second task “picture cued story telling” on June 20th. It consists of given students a picture and let them create a story according to what they see in the picture. The researcher will give them ideas on how starting the story, for example “It was spring season, when my family decided to go...”. The researcher will ask students to follow a chronological order in their speech. They have to start with an introduction, then a good development of their story, and provide a good conclusion of it. The third observation checklist is on “crossword puzzle task,” which will be done on June 21st, 2019. It has to be performed in pairs. The total amount of time will be thirty minutes.

3.5.3 Rubric

The rubric will be used to grade student's work based on specific assessment criteria. After performing the different tasks, the teacher will grade them as a group in order to see if they followed the rules given; after that, the teacher will communicate expectations on each speaking tasks assigned. The rubric will also evaluate a short speech that students will perform after those tasks. With the short speech, the researcher intends to evaluate the outcomes of the deductive reasoning strategy, as it will help the researcher determining if the strategy has been effective in helping students overcoming native language interference. The short speech will be a closure activity to evaluate at the end of this investigation and the researcher will realize if students used the deductive reasoning strategy correctly when native language interference happened. The rubric will be applied on June 24th , 2019.

At this point students already know how to use DRS, how it works, and the good results they can get if they apply it correctly. For example, students will not get stuck when they do not know how to translate one word from their native language to the second language because they will use their logical conclusion to say it; students will find a way to replace words with the vocabulary they already know; students will start getting a solution to some problems looking at them from the general aspect to the specific, and so on. A holistic rubric is used to evaluate and assess students' overall achievement in the speaking tasks. The performance descriptions will be written in full sentences. This rubric will be focused on providing an overall quality and proficient feedback and understanding of the specific topic (deductive reasoning).

3.6 Collection Data Process and Data Analysis

The interview is the first instrument applied with the eighth-grade class at Jorge Volio Jimenez Bilingual High school. There are nineteen students in the English class, all around the age of thirteen and fourteen and their English level is intermediate. The dates for the interview were June 13th and June 14th, 2019. The total amount of time spent performing the interview was two hours, with the researcher taking one hour each day. The interview was done individually, and students followed the specific rules.

Before starting with the tasks, the researcher first introduced the topic of deductive reasoning. It was a short explanation with a power-point presentation no longer than five minutes. Students felt familiarized with the topic, so it was easy for them to understand. After that, during the same day, the researcher explained the instructions for the first task “What am I?” It took no more than forty minutes for all the students to complete the task. The second observation is “picture cued story telling” and took place on June 20th, 2019. Each student had three minutes to complete the task; the total time spent was thirty minutes. On June 21st, students performed the third task, a “crossword puzzle.” The time spent was forty minutes. The assessment rubric was done after the researcher observed the students performing their tasks, which was on June 24th, 2019.

Interview

Before interviewing the students, the teacher explained what was going to be done. It was important to let them know why they were doing an interview. The researcher also mentioned in short what her investigation is about and why she is doing it. The researcher performed the interview outside the classroom with two chairs and a table. One by one each student was called as they appeared in the school list. The interviewer (the researcher) determined the background of the student by obtaining less detailed, but still personal information. The students were asked five questions. The questions provided were to be answered orally. The researcher was to write every answer in detail in her notebook.

The other section of the interview was based on seven questions. The idea with these questions was to determine the level of native language interference. To determine those factors, the topic of “false cognates” (words that seem to have a shared linguistic origin with, but they are unrelated) is used. For example, the teacher showed the students some flashcards with different false cognates and, depending on what question the researcher asked, the student would choose which cognate he or she considers correct in English. Some of the questions that the teacher asked were: How would you say “bravo” in English? pick the correct way of using the word “embarrassed” in a sentence, determine which of these sentences shows the correct meaning of a noun in English, pick the correct forms of saying “instalaciones” in English, which is the correct sentence?, what is the translation for “tela” in English, etc. The questions were to have a multiple-choice style, but were to be spoken. After asking each question, the researcher held the options of answers. Every answer provided by the student was noted. The interview took two hours to be completed with each student.

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The second interview was done on June 27th, 2019. This interview was done with the whole group, lasting no more than thirty minutes. It required that students responded in their target language to some questions provided by the teacher. The questions were about false cognates, just as those questions used before; however, but were asked in general to the group. With every answer provided, eighth graders had to explain why he/she picked that answer and why he/she thought it was correct. In other words, students had to justify their answers with a clear argument. The researcher sat in front of the class and asked the questions. Approximately, three or four students had the right to answer the same question in order to see the way of analysis they used to reach such conclusion.

After asking each question, the researcher provided three or four options in order for the students to pick one or two (the ones students considered the best). The researcher asked questions like “Why did you pick that option and not the other ones? why did you choose only one? Why are you sure that it is the correct answer? What made you think it is the right one? ” This second interview analyzed how well students use DRS, their capacity to come up with a conclusion right away, and the ability to support their answers.

Observation Checklist

The observation checklist portion of the investigation started on June 17th and ended on June 20th, 2019. The most important points evaluated were the development of tasks using DRS (Deductive Reasoning Strategy), correct grammatical structures, and pronunciation. The idea behind it was to evaluate the normal aspects of speaking based on the strategy used in the investigation. There were three different tasks and each one had an observation and a checklist encompassing factors that cause native language interference when students perform the speaking tasks.

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The task for any given day will always be based on the topic that students are currently learning in class. All the details observed when the participants performed the speaking tasks was noted in the researcher's notebook. The observation checklist is used to determine if students are performing the tasks as it must be, by differentiation of "Yes, Partially, or No." Another important function of the observation checklist is that the researcher can analyze the environment that surrounds the students at the time of performing each task. The researcher can also take notes about the students' errors when they are speaking among themselves. This helps the researcher to remember every small detail of what happened during the process, the environment, and the participant.

The first task proposed is called "What Am I?" An ice breaker task played in most social circles to have individuals getting to know each other better and be in a more relaxed environment. Some disadvantages of performing those tasks could be the limited time students have when accomplishing them; this because the task can go on indefinitely, but the teacher is limited to the classroom hours. Another disadvantage might be the complexity for some students, as they may not accustom to working on their own. The last disadvantage is that there is no direct input from an authority figure like the teacher on a continual basis.

The second task to be used is called "crossword puzzle task." It requires that students form groups of two. In each group, there will be one student with letter A and one with letter B. The student with letter A will define some words for student B and vice versa. In this way, both groups (A and B) will be able to figure out the word that is missing in their puzzle by interacting as much as possible. Before starting with this task, the researcher showed up previous vocabulary and practice for the vocabulary they use for the puzzle.

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The idea for applying the second observation is to evaluate how well students perform when taking the deductive strategy into consideration to solve problems or tasks during classes when speaking the second language (English). The instrument will also evaluate the progress that students have had during the application of the deductive reasoning strategy and to see if the strategy really helped them to diminish their native language interference and performance in their second language.

The third task that is applied is called a picture-cued story-telling task. A series of pictures will be given to the students and they must tell a story following the sequence of those pictures according to what they see in the picture. Each student will have different series of pictures in order to avoid repetition in the way of speaking. They will have previous time to organize their ideas and then come in front of the class and explain their short story. They will have to consider some import points when presenting the story; the first one is a good introduction of their story, the body, and the conclusion. The amount of time given is only four minutes.

Assessment Rubric

These are some aspects that will be taken into consideration in the rubric; for example, if students performed the task in a deductive way, whether native language interference showed up when they were performing the speaking task, and if students had previous knowledge or felt familiar with the topic of the task. The rubric will be based on the oral execution of the task, language elements, and deductive elements (what the researcher is going to evaluate). The idea of the rubric is to see how much students have advanced since the first day the task was applied until the end. The rubric will be applied after the checklist to grade students and provide

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feedback according to the process done. Its main objective is to identify and to evaluate the components of the specific process or product.

The rubric will also work together with a short speech the students have to perform at the end, as a closure of all the tasks. It will be about creating two false news, where one is going to be national and the second one international. Students must use their imagination and create the most fictional and unique news that the audience have not heard before in life. Each speech will last ten minutes maximum and five minutes as a minimum. The assessment rubric will be divided in four parts. The first part is about the elements of the language used to explain their fictional news, the organization of their ideas, intonation of their voices, and deductive reasoning. With the assessment rubric, the teacher can notice how much students have progressed and it will also help students; the teacher can give them feedback if they did not perform well.

Chapter IV

Data Analysis of the Results

This chapter focuses on the analysis of the results of the investigation. The analysis helps the researcher to determine whether the objectives were met with the help of the instruments and if the research question was answered. It includes the demographics of the students, such as their age, English learning background, family characteristics, and culture. The steps used in the analysis separate the data that is essential and has a direct effect on the outcome, getting rid of information that is not circumstantial and/ or is not applicable, explaining details of the essential information, comparison of the results, and placing the analyzed information into a format that is understood by all. The instruments used in the classroom were interviews, an observation checklist, and a rubric.

4.1 Analysis and Interpretation of the Results

The main purposes of the instruments were to determine how much native language interference affected learning English speaking and how deductive reasoning improved upon that, in accomplishing the main objectives. The instruments assisted the analysis in allowing the researcher to take note of behaviors, emotions, and feelings, effect of the environment, motivations, how feedback changed behavior, and challenges. They also allowed the researcher to check the students' use of correct grammar structures, pronunciation, chronological order in sentences, and performance when speaking English.

4.1.1 Interviews

The interview was the first instrument applied during the investigation and it helped the researcher to collect background data, as well as noting and analyzing the level of native

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language interference the students initially had. During the interview, the researcher noticed some factors that may cause native language interference. For example, 20% of the students displayed nervousness from the very beginning, even before starting. The students stated that they were nervous because they did not want to make mistakes when speaking English in front of a person outside the normal classroom setting. The students appeared to know the rules of English speaking, but when they actually performed, they would forget how to apply them correctly. The students did not organize their cognitive ideas well. They developed a form of “stage fright,” which is when an individual becomes shy or frozen with fear due to nervousness when trying to produce a speech or perform in front of an audience. It is a subconscious fear of failure and only appears when performing.

The researcher helped the students to overcome this nervousness by providing encouragement and a familiar idea, so that they would be distracted from their issues. For example, the researcher would tell the students to imagine themselves in a familiar setting, such as speaking with a family member or friend. The researcher also took some of the pressure off the students by telling them that this information would not be evaluated, but that it was intended to be used in investigation, so the researcher could obtain her bachelor degree in English teaching.

Moreover, 30% of the students, as noticed by the researcher, would return to what they already knew, which is Spanish in this case; when they were not able to produce the proper information in the correct format. However, the researcher discussed with the students the use of a coping mechanism, but in English and with the assistance of logical reasoning. Coping mechanism is the substitution of what is familiar, known personally, and internal to solve a conflict. In other words, the students were applying the correct behavior, but not in the correct

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language. When the students used this to their advantage, they replaced the word they wanted to say in English with another word with a similar meaning. They might have learned the replacement word in a class, previously. Even though, it took them longer to perform, they were able to break down the information they already knew and used it to form a conclusion about the specific question in the interview. When the students realized they could do this, they applied it to every situation, such as in speaking tasks.

One of the questions the researcher asked in the interview was regarding pronunciation in speaking. Approximately 15% of the students concluded that they needed a lot of help in pronunciation and fluency. For example, the students showed problems in the pronunciation of sound /v/ in verbs and would replace it with a /b/ sound, so the word sounded like "berbs" instead of "verbs." They would do this with every word that started with a /v/; as for instance, they instead of saying "vocabulary," would say "bocabulary." In order to correct this mistake, the researcher would immediately interrupt the students and put emphasis on the /v/ sound. Otherwise, the students would continue with the same habit and end up using it in other situations. This shows that in English teaching, it is important for the teacher to immediately correct issues with small details and not let them pass down through generations. Additionally, the students failed to develop sentences and/or phrases when they could not come up with a specific word and thus, they got stuck without finishing their idea. This broke down their fluency a lot because they did not continue and gave up even before finishing.

The researcher would then assist the students in small ways in order for them to proceed. But at the same time, the researcher encouraged them to think and use their logic more often. Unfortunately, there were some students that gave up and did not want to continue expanding their comments more in English, as when they did in Spanish. The researcher noticed that some

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of them showed fear of failure, possibly thinking the word did not exist in English or that they were incorrect. Other students were scared to pronounce words improperly and the majority did not want to make an effort to develop their ideas, acting out of laziness.

That laziness is very common because some of the students did not show their full capacity to solve problems or to do their tasks successfully. Therefore, the researcher took note that laziness is another factor that causes native language interference because, in an effort to express their arguments, the students naturally lean towards their native language because it is easier. However, during the interview the researcher encouraged each student to apply deduction and put his or her brains to work. Every time the students said they did not know how to iterate a word in English, the researcher reaffirmed them, by pushing them to think and organize their ideas and try again. In that moment, students noticed the researcher was interested in hearing what they wanted to express. Also, the researcher was not going to translate or speak exclusively in Spanish with them. Students were forced to think and explain their thoughts in English; otherwise, they were not going to be either, understood by the researcher or finished with the whole interview. When the attitude of laziness in students shows up, it is better to cut it immediately because it becomes a habit, which can be developed not only in the classroom, but also in other areas of life. Teaching is a lot like parenting, since it is important to reinforce a child's strengths and push him or her to do better. Consequently, not all individuals are meant to be teachers because teaching requires a certain sharing of empathy with the students.

Another factor that caused native language interference was the students' background, with approximately 5%. That is why the researcher made it an obligation to understand the background of each student. Most of them explained that they finished elementary school in a public school, which means they only started receiving English lessons during high school. This

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is a severe disadvantage for them due to the fact that experts recommend learning it before four or three years of age. In the first section of the interview, most of the students' answers were, "I have been learning English since I was ten years old" and they are around thirteen and fourteen years old. However, even so, the students had been interacting with the new language more and more recently, and they seem to understand a lot and perform their activities very efficiently in the classroom.

Initially 30% of the students lacked confidence when speaking English. It was another factor shown during the interview process. The majority of students had doubt when answering questions. They were not sure about the meaning of some words or even tried to invent new words to make up for their errors. One reason why this happened was because some words in Spanish sound similar in English and second language learners get confused. This exact issue was seen in eighth graders. This was clearly seen in question number one in the second section of the interview, as students were asked to translate the word "bravo" into English, that is "fierce." However, the majority of the students concluded, according to the options given, that the correct translation of the word was "brave." They came to that conclusion stating, "I do not know what the words fierce and courageous mean, the word behave means other thing, and the only one that sounds similar in Spanish is brave, so that is the correct one." Even though, the deductive reasoning strategy had not been explained to them at that point, they were using it sub-consciously.

During the process of the first interview, the researcher concluded that native language interference does show up with the eighth-grade class, while they spoke in the target language. The level of native language interference is not too high. It appeared during the production of the language, while solving speaking problems and when students felt nervous and thus, translated

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words from Spanish to English. However, the researcher helped students to diminish the issue once the students learned how to properly apply the deductive reasoning strategy.

A second interview was done with the whole group after the task. That second interview was done to correct questions that were answered incorrectly and also to hear the students' points of view on each answer given. The second interview consisted of asking students their thoughts about different topics in detail. Students had to support their answers with reasoning. The researcher asked them why they thought their answer was correct.

In the second section of the interview, the first question asked to the students was regarding the translation of the word "bravo" into English, means "fierce." Within the options given to the students there was only one correct option. When the question was asked, half of the class responded with "brave," while the other half said "courageous." The students seemed to be very sure of their own answers and attempted to sway the researcher in the incorrect direction many times by telling her that she was confused. The researcher responded that she respectfully disagreed with the students' answers. In that way, the students did not feel hurt, but valued.

The researcher concluded those mistakes happened because students were comparing the words in Spanish and English, instead of taking the word at face value. Alternatively, there were students with a large amount of knowledge of definitions of words. Those students were set as a model among the other students. A minority of the students in class were well versed in the definitions of words due to their background. Those students normally came from bilingual families and had been raised in the United States. Another evident factor in the interview process was when they were asked for the translation of the "instalaciones" into English. The students went off the sound of the pronunciation of the word assuming that it was the same as in Spanish and also because of their limited vocabulary.

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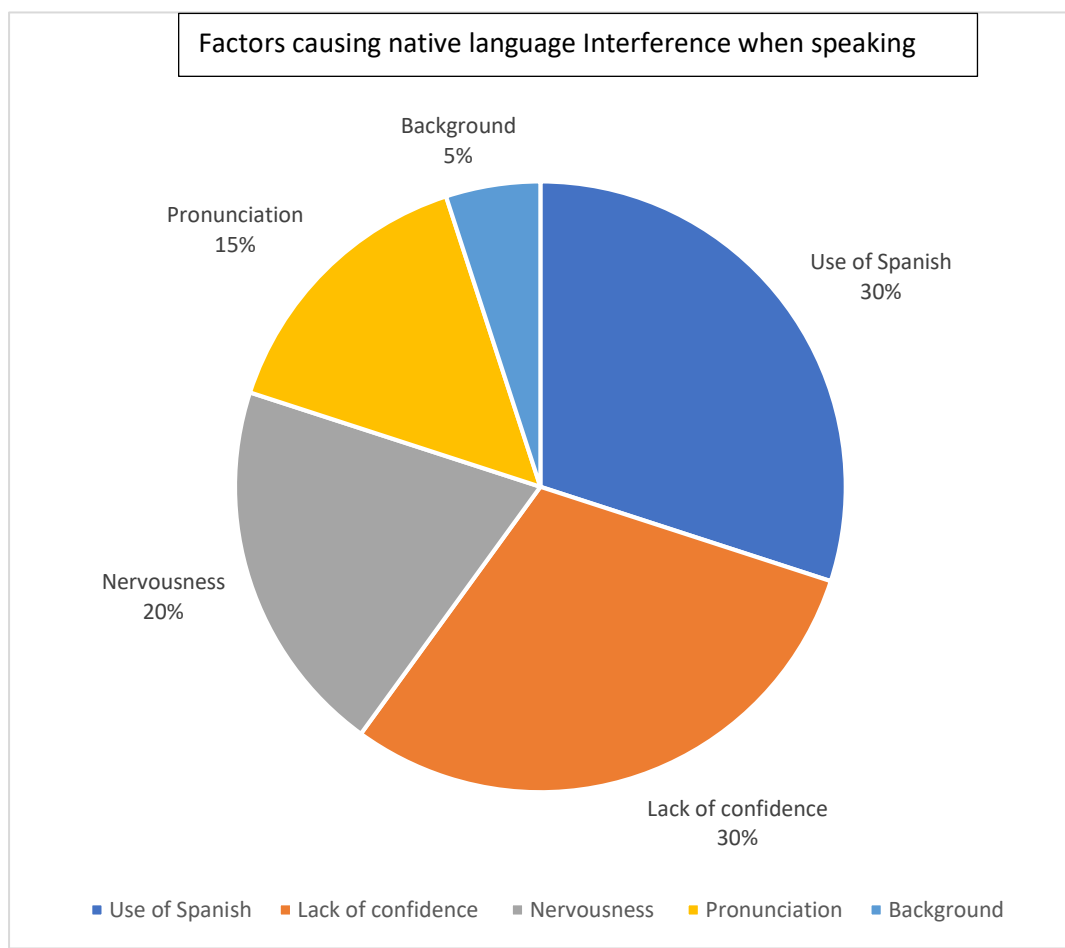
The students also showed confusion regarding grammar categories such as noun versus verbs. This happened because in Spanish the verb and the noun are re-positioned in each other's places and that is how it comes naturally to students. The students also lacked understanding of possession. It was seen that in the last question of the interview, the students were asked for the correct way of saying "ella es mi tía de parte de mamá" in English; and most of them answered "she is my aunt for my mom" instead of "she is my aunt from my mom's side." The answer provided by the students showed how much they relied on their native language instead of focusing on the English rules. For example, the topic of possession was always forgotten because they did not know when and how they could use it. The researcher explained a little bit about the definition of possession and its usage in the English language.

After the interview, in order to test the students' answers, the researcher had them to act out the vocabulary words they learned, the grammar categories and structures, and the correct use of possession. Students seemed to like the acting out activity because they were learning and memorizing without being bored or tired. In the performance of the acting out activity, the students showed a good use of deductive reasoning because in that moment they were already familiarized with the topic. They created scenes in their dramatization where the vocabulary learned was shown.

In conclusion the purpose of both interviews was to find out the source of the students English speaking problems, as well as to understand the reasoning behind the students' thinking. The researcher was also allowed the opportunity to reinforce strong points in their reasoning and get rid of any thoughts that would lead to confusion. The biggest challenge for the researcher was the limited time, as the researcher miscalculated the amount of time the interviews would

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take. Officially, the researcher would have been able to perform both portions of the interview together.



*Figure 1. Percentage obtained after the implementation of the interview.
Source: researcher's own creation.*

The eighth-grade class had a total of 22 students, where it was seen that approximately 30% of the class, which was 11 students, used Spanish a lot of when speaking English, especially when they did not know or were not sure how to say a specific word in English. Furthermore, 30% of the class (11 students) lacked confidence. Lack of confidence was shown at the time of producing the language orally such as the pronunciation of words when they spoke and

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intonation. In other words, students were not very convinced or confident when speaking in English.

On the other hand, 20% of the class, which was an amount of 10 students, showed nervousness at the time of speaking. The difference between nervousness and lack of confidence was that students could not pronounce words properly because they tended to mumble, sweat, shake, and were not able to maintain a fluid conversation. However, 15% of the class, which was around 8 students, displayed mispronunciation. For example, words ending with sounds /- ɪd /, /-d/, /-t/. Consequently, only 5% of the class, around 4 students, were affected by their background when practicing the target language (English).

4.1.2 Observation Checklist

The purpose of the observation checklist was for the researcher to see how well students performed by using the deductive reasoning strategy during the performance of the tasks. This observation let the researcher to know if the strategy was useful and if it really helped students overcoming the native language interference. The observation checklist was also used to assess performance, keep records of the areas where students needed help, and to summarize the information obtained through the tasks.

The observation checklist evaluated the students in two parts. First, the students were evaluated in relation to task development. It was analyzed the students development while solving problems; however, the researcher focused on their behaviors, aptitude, language structure, and capacity to face their fears in public while speaking. The students were also evaluated regarding the development of the deductive reasoning strategy. This was focused more on the use of the strategy as it is. For example, if students were aware of how the strategy has to be applied and if they had used previous information to reach a valid conclusion.

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Before starting with the observation checklist, the researcher introduced the deductive reasoning strategy to the students through a power point presentation. First, the researcher wanted to know if students had an idea of what the strategy was. The researcher started by asking the students the following questions, “what do you think this topic was about when you first read it? have you ever heard about this topic before?” However, 30% of them said that they had used it when solving questions on their tests, such as multiple-choice exams. That minor group of students explained that they used it when they took out the answers that were not related to the question and would leave those that were most similar in characteristics to the question. In other words, they would decide which was the correct one by defining the word that looked most alike to the one in the question. After hearing the students’ thoughts about the strategy, the researcher told them that they were very close to the definition and to what the strategy is truly about. Still, they continuously needed more help and clarification.

The idea was to let students understand the strategy, so they could apply it when solving different speaking tasks in class, as well as in their life. Once the doubts were clarified, the researcher started with the tasks. The first task applied was “what am I?” The researcher explained the task and the specific rules for applying the deductive reasoning strategy within the task. A large point of struggle for the researcher was catching the attention of the students. The students seemed to fidget a lot and talked among themselves, while the researcher was giving them instructions. They seemed interested in the activity, but they drifted into conversation and ended up forgetting what they had to do. It was important for the researcher to pull their focus back on and onto the subject to and keep them from returning to speaking Spanish. Some of them had to sit in different parts of the room very far from their friends because it became impossible for them to pay attention and to stop talking among each other.

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It was also necessary to get the students to re-articulate what problems they were facing, specifically in English. For example, getting the students to work out the problem aloud allowed a thinking process and gave the students a chance to gather their thoughts. The students continuously attempted to respond in Spanish, partially because they felt comfortable in the environment. This is not entirely a bad because they know they can trust the authority figure in the classroom. However, there was a line that the researcher was intending on drawing; in other words, the students were not her friends or family members, but she was their mentor.

The researcher continuously had to emphasize the strict use of English, not as a punishment, but to push students to beat their habits. The researcher kept the task simple by getting the students to ask 'yes or no' questions, and also got the rest of the class to work in unison. The students were asked to start the first task by asking yes or no questions from the most general and to the most specific. The instructions given included aspects such as, Spanish was not allowed in class, the participant in front of the class was allowed to ask only yes or no question, and the audience was allowed to answer yes or no. The students were not able to see the flashcard that they were holding because the idea was for them to figure it out by themselves. They were encouraged to ask as many questions as they could and to have constant conversation with the class. This helped them figure out what person or object they had in the given flashcard

For this task, the researcher pretended that she was a student (one of them) allowing comfort and openness. The researcher dramatized a situation similar to what the students had to accomplish in this specific task in English speaking. The students seemed to really enjoy the "Who am I?" task because they were stimulated and there was a certain type of mystery. For example, having to figure out the unknown word along with the involvement of the rest of the class generated a sense of satisfaction at the end. During the task, the student in the front of the

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class was left to think on his or her own without direct assistance from the teacher or the researcher, as the researcher minimally guided the students in what sort of questions they should ask because they kept shifting to more open-ended questions, where the other students would use too much information. Sometimes the researcher had to interrupt the students' performance when the students did not follow the rule of the activity that was only yes or no question and the audience had to answer yes or no. The students were only interrupted when they mispronounced words. In that moment, the researcher interrupted by pronouncing the word as it had to be.

A number of the students paused for long periods of time because they were frightened of the reactions of the other students; in this case, they were not allowed to assist them because they could only answer with yes or no. This, however, gave the student time to reorganize his or her thoughts and come up with a solution. From this, the researcher observed that one of the main errors teachers in general make is assisting the student too much or giving the student too much information. By doing this, the teacher is setting the student up for failure, not only in the English classroom, but also in life because the students end up thinking that they can always return to a primary source of information or find easy information. It is important to teach students that everything good in life requires effort and consistency. If students are trained to analyze and solve small problems, they will be able to overcome even tougher issues. Moreover, the researcher told the students, depending on who was in the front of the class asking the questions, that other students would try to assist some more heavily than others. This was due to peer pressure, social status within the high school, or even boredom when trying to get the activity move at a faster pace.

During the performance of this first task, the researcher noticed how well students applied the deductive reasoning strategy when solving issues and how it helped them to think

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better before speaking. However, not all of them applied the strategy correctly because approximately 50% of the students showed limitations such as doubts, insecurity, refusing to think in English, and inability to work under pressure. Each student from this group experienced doubts from the initial stages of the tasks instead of being creative or attempting to come up with a solution. The researcher reminded the students the details of the strategy and direct them towards the correct method using a first-person example. A number of the students refused to even try due to the fear of failure. They were also scared that they would be embarrassed. The researcher would first set boundaries and set a form of authority, calling for the students to have understanding and an open heart towards each other because they all were there to learn the same material and were equal.

At the same time, 50% of the class severely relied on their peers or close friends for help with definitions or translations of words during the application of the task. This resulted in disunity and conflict among the students. They always attempted to get out of speaking English by asking questions in Spanish; however, in that moment the researcher stopped them in a respectful way and reminded them about the instructions given. The students always requested more time to finish the task, while at the same time they were stubborn to ask for help in English. They would take a large amount of time to complete the task for this reason.

To overcome this, the researcher interrupted the students and re-established the rules. The researcher encouraged the students to ask relevant questions to reach a conclusion, but she would not allow them to become reliant on the opinions of others. They were taught to use the information they already collected to come to a conclusion. Even though, this eighth-grade group had a good level of English, it was prevalent that there was a minor level of native language interference when speaking.

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In the process of asking questions, some students made several mistakes regarding the structure of sentences, such as “I am a person? I am a men? I am famous? Do he has? I appear in movies? I am have long hair? what kind of movies I appear? Is a fantasy thing? and Does I appear in cartoons?” They put stress at the end of each of these structural mistakes assuming they were questions. In order to correct their mistakes, the researcher reiterated the wrong word said by the student, so the other students could assist with the corrections. By doing so, the researcher made sure the students were paying attention and the mistake would be corrected by everybody and not only for the student that made it. Although, students made grammar mistakes during the performance of the first task, it is important to recall how well most of them applied the deductive reasoning strategy and how much it helped them diminish their native language interference and overcome each problem presented during the task.

In this part, the researcher concluded that 50% of the students used the procedures properly, while the other 50% of them did not. In the moment of asking the questions to their classmates, a number of the students showed disorientation and disorganization. Once the researcher told them to start the task, they answered with “how do I have to start with the questions?” In that moment, the researcher explained again the task and how to use the strategy correctly. The 50% of the students that failed to complete the task were not paying attention to the instructions given by the researcher, as they got distracted talking to classmates and with their phones. Realizing what was happening, the researcher also separated the students that were distracting others and sat them separately from each other. When this was done, the whole class started focusing on what they had to do and paid attention to what their classmate was asking.

On the other hand, it was concluded that another 50% of the class cooperated when their classmates were trying to figure out the answer of their questions. This happened because the

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group was divided in small groups around the class. There were groups of three, four, six, and even seven students all around the classroom. Each group had members that did not want to work with other classmates, but only with those in their social circles.

Since first meeting these students, the researcher noted that each group had people with different personalities, and they did not like to mix with others because of differences in thinking. Each student had his or her own way of working in class. The students even told the researcher this directly. For example, a group formed by five students were asked, “why do you like to work together most of the time?” The group answered, “we feel that we all work better in class when we are together.” Throughout the days, the researcher realized that students who worked closely together were better. They always finished first their tasks, had a good level of English and concordance. They also had good grades on their tests and homework.

Another group that was asked the same question stated that they had the same personality, style, and tastes in different things. The last group that was asked the same question answered saying, “We do not feel comfortable working with other classmates, so we prefer working together because we have been best friends since elementary school.” However, in the first task, the researcher tried to encourage everybody to participate and help each other to accomplish the task. Most of them forgot their differences and participated. Others just refused to talk and help other classmates if they were not in their group of friends. According to the behavior observed in class, the researcher concluded that decisions were partially made as a unit. It was noticed that only 50% of the class participated and showed interest. This form of behavior comes from the primitive instinct that safety comes in numbers. Especially in the high school setting, students tend to conquer the high school challenges in that way. Some of these challenges may be in the form of lack of security, lack of belonging, social isolation, bullying,

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and harassment. This sense of inclusion is important when modeling problem solving, but it is also important to get the students to be independent because students will overcome struggles in that way.

Also, during the first task, it was observed that most of the students had a little bit of knowledge regarding deductive reasoning strategy. It was an advantage for students and the researcher. Students could learn more on how to apply it and the researcher could see better results when students solved problems. The researcher found out that the deductive reasoning process is innate in every single student in that class, but the students tended to have more problems with the grammatical structures and functions both, in Spanish and in English. Basically, the researcher encountered an additional, totally different, challenge of learning English at this school. However, the good news is that the deductive reasoning strategy can assist in the correction of this as well, but it would also require the students' attention and compromise in their learning process.

The second task applied was a "storytelling." The students were encouraged to create a story based on what they saw in a picture and explain it as if that story happened in the past. The researcher gave them the structure of a correct chronological order on how the story had to be developed and at the same time it worked as a guide. In addition, on the board, the researcher wrote the steps to follow. For example, they had to start with a title and an introduction, the body and then a conclusion. When performing the speech students had to be sure of creating a persuasive speech. Every little detail counted in that moment because one minor mistake could lead the audience to a misunderstanding. That is why, the researcher gave the students time to organize their ideas in a sheet of paper just for them to remember the order of their story. In this task students not only put into practice the use of deduction, but also they learned how to

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perform a good speech. There was intended to let students understanding the different types of speech before they performed the storytelling task.

In the development of the second task, some mistakes regarding grammar tenses were observed such as speaking in present tense while the story had happened in the past, incorrect use of present perfect, such as “my dad has already go” instead of “my dad has already gone,” omitting the ‘s’ in the verb when they referred to one person. Other examples might be, “my father buy” instead of my father buys, “my dad start” instead of my dad starts, and “it start raining” instead of it starts raining. The students also got confused regarding singular and plural words at the moment of speaking in front of class; for instance, “the childs,” instead of the children. There was wrong pronunciation in words such as mountens, estusiaslly, faithful by pronouncing them in the way they are written. For instance, some ending sounds with /-ed/, /-t/, /-d/ as well as “th” in bathrooms and birthday. Some students also brought a sheet of paper as a “guide.” However, they started depending on what they wrote. In that moment, the researcher stopped their presentation and asked them to put away their notes and to continue without them.

In order to clarify all the problems presented during the second task, the researcher asked each student to make a sentence according to a verb and subject that they were given using an specific tense. Students had to make the sentence right after the researcher gave them the words. In the process, it was shown that students knew the correct rule because in that moment none of them failed. It took them no more than two minutes to answer. The researcher concluded that most of the students made some mistakes when performing their storytelling, as they were more focused on finishing the story than paying attention to what they were saying in English.

Over time, the researcher started focusing more on the incorrect pronunciation of some words. When students participated and interacted in other activities, they mispronounced some

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words; consequently, the researcher interrupted them and reiterated the wrong word as a question. That was done as a form of encouragement and so they noticed their mistakes and they would correct themselves. However, only half of the group was aware of their own mistakes. Every time this group realized or felt they pronounced something wrong, they stopped and changed the word immediately.

As a conclusion, it was affirmed that 50% of the students realized when they made mistakes and corrected themselves automatically, and the other 50% of them did not notice and continue as if everything was spoken correctly. There were also some false cognates heard in the process of asking questions such as “temblors” referring the word in Spanish “temblor” instead of “tremor” and “childs” instead of “children.” Those problems were seen due to Spanish because the words have similar sound in the pronunciation and students also tended to think that the rules in Spanish apply for English, as well.

The third task applied was a crossword puzzle. It required the students to form groups of two. In each group, there was one student with letter A and other with the letter B. Students with the letter A defined some words for students B and vice versa. In this way, both groups (A and B) were able to figure out the word that was missing in their puzzle. Each puzzle was different for each group (A and B) and the word that student A was missing, student B had it and vice versa. The researcher told the students to hide their papers as much as possible, so their classmates were required to figure out the missing words. Before starting the task, the researcher showed previous vocabulary and practice to perform the puzzle.

The topic was “movies” and the students were to practice it along “passive voice.” During the crossword puzzle, students showed great interest and were very open to the task. They got used to working hard with the speaking skill. Every time the students saw the

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researcher they asked, “what will be the new task for today?” Some of them expressed how much they enjoyed the class because they did not have to write or read only to speak. However, they got tired and lazy after lunch time, but felt better when they were improving their speaking, rather than writing. For them, it was easier to produce the language verbally than in writing, according to what they said.

The researcher noticed that it was very difficult to get rid of the native language interference problem as a whole; this could be due to living Costa Rica and most of the people speak only Spanish. All forms of promotions, media, and entertainment are translated into Spanish. Therefore, people must be compromised in the learning process and try to surround themselves with the English language in order to learn it very well. For example, one of the recommendations that the researcher gave the students was to practice English at home by listening to songs, watching movies, singing songs, and reading sub-titles of the movies or lyrics in English. They can practice the language skills in general with different videos that people post on YouTube. The researcher explained that the more they practice the target language the easier it will be to acquire it. They will get to a point where the language will come fluid and naturally. Therefore, it is very important for them to apply deductive reasoning and think before saying something in English. Thinking in English is better than thinking in Spanish, because learners need to train their brain, since the initial stages of life.

In the performance of this task, students interacted a lot among each other. They were seen doing their best and working hard to figure out the correct word for the puzzle. The researcher walked around the class in order to make sure the students were working. During the third task, it seemed that students got used to the application of deduction. Every problem presented they overcame it by thinking and analyzing it in the proper way. There was one

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specific word in the puzzle that group B was not able to accomplish with their partners. The researcher helped them by defining the word in a different way and showed an example. The idea was not to tell them the word, but to encourage them to think and come up with it by themselves. Today, students are accustomed to getting everything very easily without putting their brain to work. That was one of the main areas that the researcher put into practice with the idea to train successful generations for the future.

4.1.3 Rubric

In this last part of the investigation, students were asked to create two fictional news stories using their creativity. The news had to be very interesting and students were allowed to start in the way they considered best, but always following the rules of the deductive reasoning strategy. The first aspect to be evaluated, at the end of this investigation, was the organization of their ideas. The researcher concluded that 80% of the students performed the task in an excellent way (according to the rubric format established). They hardly got stuck when speaking in English and fought to deduce things by themselves. They also showed a great interest in what they said things and were aware on how to say some words in a proper way. They had large amounts of confidence in their speech from the beginning to the end. Therefore, it was concluded that after knowing how to apply the deductive reasoning strategy, students decided to use it more due to its good results.

The remaining 20% of the students were evaluated with a very bad score according to the evaluation format; as these students showed a great disorganization in their ideas, they seemed lost, and they also tried to memorize things instead of coming with their answers naturally. Some of the students mispronounced words during their speech and this was considered as a part of

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their disorganization. Even though, the students were aware of their problems they decided to continue instead of self-correcting.

Additionally, students' native language interference continued showing up but less than in the other tasks done previously. However, what did appear in different ways was that they continue to create words in English that did not exist, thinking those words truly existed because they sounded similar to words they knew. A number of the students seemed to focus on what they felt at the beginning instead of the rules of second language acquisition, as later explained by the researcher.

Towards the end of the sessions with the students, they were more aware of the rules and realized that it was okay to make mistakes and perform self-correction.

On the other hand, a number of the students considered themselves too bold to ask for assistance from a strong source and set in their ways, continuously making the same errors. The researcher realized that in order to deal with these types of students it is important that they never be abandoned and that the teacher understands the larger context or reason why they are behaving in this manner. Much in the same way, students that behave in a fearful way might have external factors that might affect them. These factors may be outside of the teacher's control, but it is important to be aware of them and if it is necessary take the students outside the classroom to speak to them in private.

At the end of the investigation, the students improved behavior compared to the beginning in the following areas. The fears of speaking in front of the class disappeared almost completely because students became more confident, independent, aware of their own speaking, and self-corrected pronunciation of ending sounds such /- id, -t, -d/ and letters "v" and "b." The students' awareness of what they were saying was noticed because they corrected themselves

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every time they made the mistakes. The students' confidence in English speaking in front of the class was improved due to the awareness of what they were trying to explain. Sometimes, when students were not sure about how to say a word in English they asked for help in private and the researcher assisted them. The students' independence while creating phrases by themselves was improved almost totally. They only asked for help when they considered it extremely necessary and almost impossible for them to figure it out without help. All those factors mentioned, allowed to see a 80% of improvement on students' confidence when speaking the language; 60% of improvement on students' independence and 40% of improvement on students' awareness.

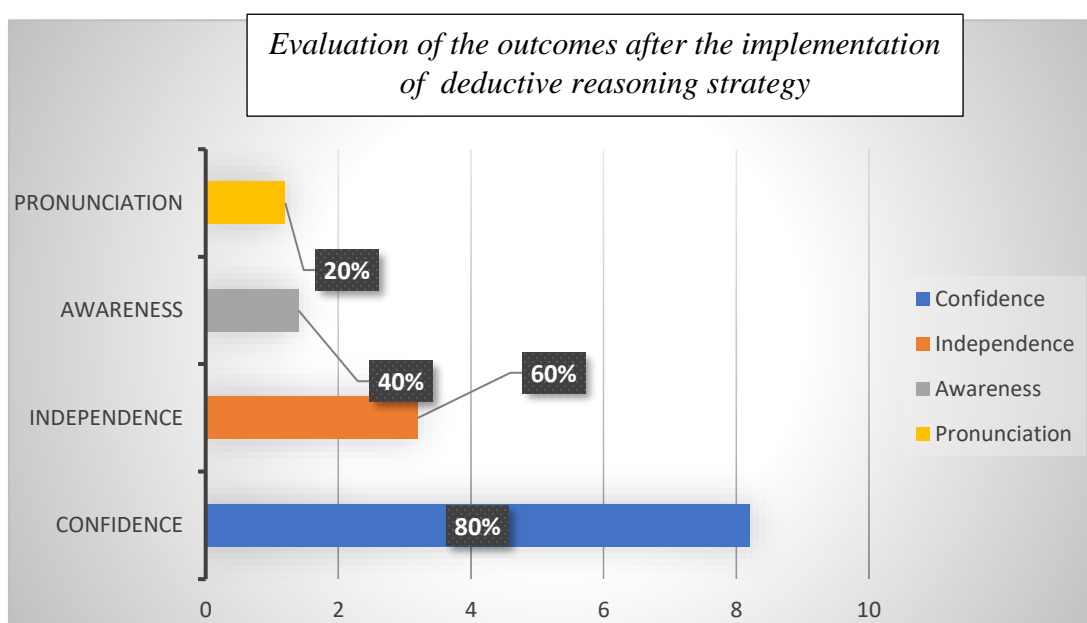


Figure 2. Percentage of self-governance obtained after performance of deductive reasoning strategy. Source: researcher's own creation.

During the application of the rubric, the researcher concluded that there was an improvement, since the beginning before the introduction of the deductive reasoning strategy until the end after the introduction of it. There was a significant improvement on students' confidence when speaking the language. The researcher affirmed that 80% of the class, around

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18 students, showed improvement related on their confidence when speaking English. On the other hand, 60% of the class displayed independence when performing in English just with minimal assistance. Around 16 students of the class showed up more independence when solving problems, they only asked for help in order to confirm if what they were going to say was correct or needed improvement. Furthermore, 40% of the class, approximately 16 students, was completely aware on what they were saying when speaking English. They paid close attention to grammar structures, chronological order, and meaning of words when speaking; in order to avoid making the same mistakes they had since the beginning. The last but not least, the improvement of students' pronunciation was a lot, since the first interview done by the researcher. Words ending such as /- ɪd /, /-t/, /-d/ were overcome for 20% of the class, that means that around 14 students could pronounce words in English better than before the application of the strategy.

Chapter V

Conclusions and Recommendations

5.1 Purpose of the Conclusion

The conclusion is focused on the accomplishment of the objectives within this investigation. The researcher provides results based on the improvement shown in class by the eighth graders, explaining in detail every behavior, assessment, and action displayed during the execution of the objectives working with the instruments.

Besides, in this chapter, the researcher intends to provide important recommendations that all future investigators must keep in mind if they want to carry out a research related to this specific topic. It will also include the restatement of the research question where the researcher provided an explicit answer. However, there will be some explanations in regard to unexpected results.

5.2 Conclusions

5.2.1 To analyze the deductive reasoning strategy effectiveness when native language interference appears while solving English speaking tasks

The researcher noticed that the eighth graders achieved better results once the strategy was introduced to them and implemented. It helped them to organize their ideas in a proper way before speaking English; as for example, it helped the students in the areas of pronunciation, correct use of grammatical tenses, management of confidence, diminished use of the native language, development of analytical and reasoning points of view, recognition of mistakes (awareness), and self-correction.

It seemed that the deductive reasoning strategy , not only helped students to solve problems in their learning process, but also in their daily life. The development of independence when

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solving problems was a great advantage that the deductive reasoning strategy brought along, since the students now were capable of providing their own critical points of view to every situation presented in life. They did not have to depend on what other people said, thought, or did when figuring out tasks because they already put into practice the steps to come up with answers or conclusions. The students along with the researcher worked in class using information already available and putting it into practice for it to become useful knowledge; that is, students did not memorize at all during the English classes, but they put into practice what they learned. That behavior became a habit and students ended up applying it naturally.

At the beginning, it was very tough to get the students motivated and confident in their work because they were being taught to organize their ideas differently to what they normally would. For this reason, they showed a lack of coordination in their speaking. That is why when they attempted to translate a word from Spanish to English, they became confused because of the slight similarities between the two languages.

Coordination, in this case, means following a set of rules and steps to reach a result. For example, at the beginning of the storytelling task, the students were trying to express all of their ideas at once. Even, the students provided some parts of the conclusion at the beginning of the story and they did not conclude the story properly. The researcher noticed that prior to knowing the deductive reasoning strategy the students were struggling in the way that they related to the organization of their ideas because they were not sure on how to say something specifically. After these mistakes were noticed, the researcher wrote the outline of the storytelling process for them to follow. It was done as a mechanism to guide the students. Once they received this information, they were able to follow the structure and produce their message by thinking and analyzing it on their own.

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Another problem that came as a result of the lack of motivation and confidence, was the mispronunciation of words while speaking. Because students lacked confidence when speaking English, they were tended to make a lot of mistakes without being aware of them; in addition, such lack of confidence affected their pronunciation when producing, it was hard for students to be sure which the right pronunciation was or even if they pronounced words properly way, as they doubted about it and ended up changing it for the wrong one. They made some mistakes regarding the pronunciation of word ending sounds such as /- id, -t, -d/. To overcome that issue, the researcher interrupted the students once they mispronounced words by repeating exactly what they said and, at the same time, encouraging them to notice the mistakes and correct them by themselves.

5.2.2 To determine the factors causing native language interference while speaking

Through this specific objective, the researcher was able to figure out the factors that caused native language interference, which were the students' backgrounds, environment, lack of confidence and awareness, laziness, lack of correction from teachers, and memorizing instead of thinking through. The researcher determined this with the implementation of the interviews and also through The observation of the students when performing tasks at the very beginning of the investigation.

The interviews helped the researcher to determine some of the factors with the answers provided by the students. The researcher chose the interview as a way to determine the causes of native language interference because the students were able to answer by their own critical opinion and they could also answer based on specific options prepared beforehand by the researcher. During the first portion of the interview, it was easier for the researcher to use one-

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on-one communication with the students because she was able to take a larger amount of time to observe and understand the students and record any details about her encounters.

Once the students provided their own opinion to each question, the researcher analyzed each word in detail to see what the students needed to improve regarding their English grammar and vocabulary and in the area of speaking. This also had as aim to recognize the students' strengths, weaknesses, opportunities, and threats. Some of the strengths the students had during the interview process were that they were able to maintain basic conversation in English, they understood what they were asked, and were able to answer questions. However, this led the researcher to also realize a number of weaknesses in their speaking, such as mispronunciation of words, incorrect grammatical tenses, and misperception of meanings or definitions of words. The students also tended to mumble a lot because they were unsure of their correctness.

Moreover, some of the opportunities the students had for growth were using the capabilities and enthusiasm of a new teacher in the classroom, who focused on using only English when speaking, the use of the reflecting deductive reasoning strategy, and, in the future, to the visit to English speaking countries being at the same time surrounded by the culture. Some of the threats the students are facing is that they live in a country where most of the people speak Spanish, a government that does not focus on financing education, and, low standards of living. The government continuously increases taxes, while the wages of the common person decrease, and these students are unable to afford better education. A few of the students also did not receive assistance from their parents in terms of motivation and feedback.

When the students were performing the second part of the interview, they were able to expand their answers by stating why they came up with their ideas, what made them to know their answers were correct, why they chose a specific option and not another one, and why they

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considered that specific point of view was beneficial for their answers. In that way, students were able to develop their answers more and the researcher recorded everything they explained. As a conclusion, the researcher affirmed that the first specific objective was accomplished because she was able to determine factors that caused native language interference during the investigation process with the help of the instruments.

5.2.3 To implement the deductive reasoning strategy to overcome the native language interference

In this part, the deductive reasoning strategy was applied with three specific tasks as a way to encourage students to use the strategy as much as they could. This was applied, not only in relation to the tasks, but the students were also encouraged to perform other activities as well. During the performance of the tasks, the researcher noticed how much the strategy had helped students to overcome native language interference. Every time a problem was presented, they were encouraged to find a solution depending on what others have told them. One of the main focuses of the strategy was to force students to work by themselves. Every time they struggled when speaking English, they found a way to continue and express all their ideas appropriately.

As a conclusion, in this part of the investigation, students got used to the procedures of the strategy and were able to apply it in a correct way. After the students were taught the strategy, they became more aware of the English language rules in order to be understood by the audience, while speaking. The students also ended up working more as a collective group to accomplish the tasks involved. For example, during the “Who am I?” task, the students assisted the one speaking by giving him/her clues as to reveal who he or she was. Even, the students who were very timid or did not normally communicate with the rest of the class were included. After applying the “Who am I” task and the second interview on “false cognates” , the students

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performed a type of role-play where they had to act out one of the celebrities to put into practice the vocabulary learned. Students revealed the celebrity by using their logical thinking.

Regarding the vocabulary from the interview, the students dramatized a fictional story using the vocabulary taught. All these activities had the aim of showing the students the use of deductive reasoning and its benefits. The students had already learned in school a form of deductive reasoning, but they did not recognize that what they were learning could be executed or attributed to English speaking. The students did not have to remember that it was a strategy to be used every single time because it came naturally to them.

The second task was a “storytelling.” Here, it was noticed how the key message was conveyed by students at the moment of producing the language in the way the students organized the parts of the story. The researcher told the students to create a story that fit the structure use: Title, Summer vacation; introduction: It was summer season when my family decided to go to the beach for vacation; Body: explanation of what happened during the trip, and; Conclusion: a the end, my family and I had a lot of fun during that weekend, laughing and sharing good anecdotes together. The researcher provided such structure as a guide, so students had a better idea of what the researcher wanted them to include in their story. From that moment, the students followed the steps given and created their stories much better. The researcher explained that formula with the intention of leveling up those students that were kind of lost. There were approximately four students in the class that seemed to be confused on how to start the story; that is, why the researcher provided the example with the final purpose of helping the students that were falling behind and to encourage them to continue moving forward.

5.2.4 To evaluate the outcomes after applying the deductive reasoning strategy

During the evaluation of the outcomes, the researcher noticed a significant improvement in regard to diminishing native language interference when students spoke. The students were evaluated with a rubric during the performance of two fictional news that they had to create. This was considered the last part of the investigation and from this part, the researcher concluded that students had made minimal mistakes compared to the beginning. It was seen that the majority had improved a lot thanks to the deductive reasoning strategy, as it helped them in the organization of their ideas so, every time they spoke, they analyzed what they wanted to explain. In that way, the students' ideas were very clear. Therefore, it can be stated that the students improved the grammatical structures that were struggling with almost to the maximum point.

The vocabulary taught was used correctly along with the grammar tenses. They also performed very well due to the researcher's feedback given when they made the mistakes. It was seen that the students tried to avoid making the same mistakes as before and they granted close attention to what they were saying. Moreover, laziness and the use of Spanish were seeing very little during the students' performance. That happened due to the influence of some classmates that were causing disorganization and confusion within the group. Even though the researcher provided a lot of encouragement for those specific students they continued with the bad behavior. This was concluded based on the answers that students provided when the researcher tried to get them to focus on their tasks. The students just did not care about learning English because they did not see advantageous to learn the language. In that moment, the researcher explained to the students that English was a subject in school that was required to graduate and if they did not put their effort it would not be possible.

5.3 Restatement of the Research Question

The question that the researcher aimed to answer in this investigation was, “How can deductive reasoning strategy help eighth graders overcome native language interference when performing speaking tasks?” During the development of the investigation, the researcher figured out the ways in which deductive reasoning strategy would help students to diminish native language interference when speaking English. The researcher meant “diminish” and not “overcome” because it was proved that native language will always interfere when students learn English as a foreign language because of the environment that they are exposed to everyday.

The eighth graders live in Costa Rica, which is a Hispanic country and almost everything is written and spoken in Spanish. Students are prompted to speak in Spanish more than English in their everyday life. Even though, the students know the rules of the language and the proper way to use them, it was seen that native language interferes approximately 95% when students produce the language orally. It happens due to the lack of practice. The majority of the students only speak English when they are at the school. It is also important to mention that the students only have English classes three days per week, so the students do not practice every day. It would be better for them to do so in order to level up.

The deductive reasoning strategy was used to help students process and break down information to solve some riddles and problems. Students acquired the strategy just with minimal assistance from the researcher, as it was planned since the beginning. The students had an intermediate level of English, which was beneficial for the researcher when the strategy was introduced. The speaking production was almost perfect once the students focused on deducing by themselves and paying attention to what they wanted to say in English. The students only needed that small tool as a tool to improve their learning process. They saw good results once

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they realized they just had to stop and think before speaking. In addition, they learned how to break down the information that was already learned or provided and put it into practice to see good results. They realized that it was not impossible or difficult to speak English without using their native language, but that they required time and effort in order to succeed.

5.4 Recommendations

For future investigations the researcher recommends implementing more activities that encourage the use of analysis and deduction in class. It was seen that the more learners practice the strategy, the easier it will be for them to take it as a habit. The implementation of speaking tasks worked very well with this strategy and it is highly recommended for future investigators that want to reinforce speaking production with students. However, the deductive reasoning strategy is good to be used with all the English skills and not only with speaking. It can work perfect in the reinforcement of reading when students have to answer questions with regards to the texts; since the students are more prompted to deduce and think according to the information provided.

The researcher recommends all schools to implement critical thinking methods in their classrooms, so that the students will avoid memorization. If the schools implement this method in their classrooms, the students will be willing to make use of the information by their own and the need for memorization will be diminished. The researcher notes that sometimes it is necessary that students, on the general basis, to be forced to come up with the answers when they have limited information. If not, teachers will be raising a generation that is lazy and expects everything to come easily and quickly.

To the parents, the researcher recommends that they pay attention to the students' use of their time. If they push them to use it wisely, they will accomplish more with their English

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learning at home. For example, instead of playing video games or focusing on their phones, they will be able to reinforce their learning, and a skill, like speaking, that is applicable for their future. If parents are more aware of students' grades on their tests, they will also be able to see whether their children are in need of extra help. For this reason, it is important for teachers to be in constant communication with the parents about how the students are doing. The teachers at Jorge Volio Jimenez High School represent this very well, because they also set meetings with the students' parents for giving them the student's grades and to tell them any bad/ good news related to their children's behavior.

The final recommendation, on a general note, would be that teachers must be very alert to the way students speak, as one minor fault allowed by the teacher will be continued to be used incorrectly by the students throughout their entire lives. Students will end up thinking that they are correct and, perhaps, they will never be able to realize their mistakes.

Appendixes

Interview

False Cognates

Purpose: To determine how native language affects eighth grade learners of English

Instructions: Listen to each question very carefully. Each question will be read aloud only three times. Choose the correct answer. You only have 2 minutes to provide your answer.

The first section will include unstructured questions, such as:

1. How old are you?
2. How long have you been studying English?
3. What are your reasons for learning English?
4. What has been the biggest challenge for you in learning English?
5. What aspects of your speaking do you need reinforcement in?

The second section will include structured questions, such as:

1. How would you say “bravo” in English?

The students would be given four options to answer: a. brave, b. fierce, c. behave, d. courageous.

2. Pick the correct way to use the word “embarrassed” in a sentence.
 - a) Sally had a baby at the hospital yesterday because she was embarrassed.
 - b) It is so embarrassed to lift heavy objects in a factory.

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- c) Jimmy felt embarrassed because he had toilet paper stuck to his shoe when leaving the bathroom and was ashamed.
3. Tell me which of these sentences show the correct meaning of a noun in English:
- a) Sebastian is a conductor for Uber during the weekends.
 - b) Jill works part time as a conductor for the London Symphony Orchestra.
 - c) Isabella is a driver for the Queen tribute rock band.
4. Pick the correct forms of saying “instalaciones” in English?
- a) Facilities
 - b) Interstellar
 - c) Installations
 - d) Intersections
5. Which is the correct sentence?
- a) Sam was runner to the bus because she was late.
 - b) Dillan running the 5k event at school because he loves exercise.
 - c) Samantha runs Windows operating system on her computer.
 - d) Bobby ran in a wall because he was distracted.
6. What is the translation for “tela” in English:
- a) Factory
 - b) Patella

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c) Fabric

d) Teller

7. Pick the correct way to say “Ella es mi tía por parte de mamá” in English?

a) She is my aunt for my mom.

b) She is my aunt from my mom’s side.

c) She is my mom’s sister.

d) She is my aunt from my mom.

Observation Checklist

Tasks developed

Purpose: To implement the deductive reasoning strategy within speaking tasks

Instructions: Answer each question about the students' performance by checking one of the three options given, "yes, partially, or no". Furthermore, explain in detail within another sheet of paper every important characteristic seen in students' performance.

Tasks developed	Yes	Partially	No
Have the procedures been used properly?			
Group worked together and helped each other?			
Decision made as a unit?			
Key message conveyed?			
Did the group reach a decision quickly?			
Did the group reach the decision by communicating only in English?			
Did the students replace English words with Spanish?			
DRS developed			
Are students aware of any mistakes they are making?			
Are the students following the necessary steps given by the teacher?			
Did the students define the general statement?			
Did the students reach a valid conclusion?			
Did the students follow a logical order ?			

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Did the students analyze and evaluate before and after the task?			
Did the students make predictions about the consequences of the theory they came up with?			

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Assessment Rubric

Purpose: To evaluate the outcomes students get after learning and applying the deductive reasoning strategy.

Instructions: Check either “excellent, very good, good, or needs improvement” according to the students’ accomplishment of their fictional news performance.

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Needs improvement</u>
Organization of the ideas when performing the task.				
Grammar structure and vocabulary had concordance when spoken.				
Good time management to complete tasks.				
Deductive reasoning applied with its respective steps.				
The tasks were clear and instructions easily understood.				
Explanations were specific, short and clear when performing tasks.				
Understanding of subjects was proven.				
Comfort when using deductive reasoning in tasks.				
Clear motivation displayed.				
Interest shown when speaking.				
Students performed the tasks in a deductive way.				
Students’ native language interference did not show up when they were performing the speaking task.				
Previous knowledge or felt familiarization with the topic of the task.				

Carta del Lector

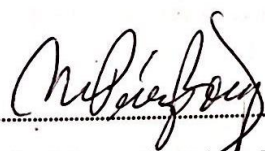
San José, Agosto de 2019

Máster
Dinier Amador Serrano
Director de las Carreras de Inglés y Enseñanza del Inglés
Universidad Internacional de las Américas

Estimada señora:

La estudiante Selena Vallejos Suárez, portadora de la cédula de identidad no. 7-0258-0616, ha presentado para su lectura y corrección de estilo la tesina denominada DEDUCTIVE REASONING AS A STRATEGY TO OVERCOME NATIVE LANGUAGE INTERFERENCE IN SPEAKING TASKS WITH EIGHTH GRADERS AT JORGE VOLIO JIMÉNEZ BILINGUAL HIGH SCHOOL DURING THE SECOND QUARTER OF 2019. He revisado y corregido la coherencia de los objetivos con el marco teórico, instrumentos y resultados, la calidad del trabajo y la relevancia del trabajo. Por lo tanto, hago constar que este se encuentra listo para ser presentado a la Universidad como trabajo de graduación.

Atentamente,



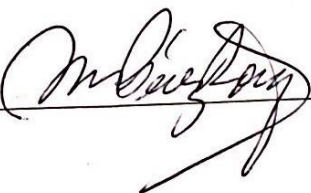
Licda. Margarita Pérez Roig
Lectora de Tesis

Tribunal Examinador


Esta Tesina fue aprobada por el Tribunal Examinador de las Carreras de Inglés de la Universidad Internacional de las Américas, como requisito para optar por el grado de Bachiller en Inglés con énfasis en enseñanza.



MSc. Yanith Delgado Chacón



Licda. Margarita Pérez Roig



MSc. Dinier Amador Serrano
Director de las Carreras de Inglés



Universidad Internacional de las Américas Código de Ética

La suscrita Selena Vallejos Suárez, número de carné: 7-0258-0616 graduada del grado de bachillerato en Inglés con énfasis en enseñanza de la Universidad Internacional de las Américas, se compromete a cumplir, durante el ejercicio profesional, con el Código de Ética de la Institución, que se rige por los siguientes principios:

PROBIDAD: actuar siempre con rectitud y honradez.

PRUDENCIA: actuar con pleno conocimiento de la materia sometida a su consideración.

JUSTICIA: permanente disposición hacia las funciones de la profesión, bajo los lineamientos legales que debe respetar todo profesional.

RESPONSABILIDAD: cumplir con los deberes, tanto en calidad como en oportunidad.

DISCRECIÓN: guardar respeto sobre los hechos o informaciones de los que tenga conocimiento con motivo del ejercicio profesional, sin que esto perjudique las funciones y responsabilidades.

INDEPENDENCIA DE CRITERIO: no involucrarse o comprometerse con situaciones, intereses o actividades contrarias a la moral, a la sana crítica y que, por ley, sean incompatibles con las funciones profesionales correspondientes.

DIGNIDAD Y DECORO: actuar con sobriedad y moderación.

TOLERANCIA: evidenciar una actitud paciente y de comprensión ante las opiniones divergentes que puedan expresar otras personas.

EQUILIBRIO: desempeñar las funciones profesionales con sentido práctico, buen juicio y equidad.

ACTUALIZACIÓN: comprometer parte del tiempo en actualizar los conocimientos y adaptarlos en el desarrollo de la actividad profesional.

VOCACIÓN: mostrar siempre apego al trabajo y a la educación recibida, como fundamentos para el desempeño laboral.

BUENA FE: toda conducta o comportamiento, criterio emitido y labor desempeñada debe basarse en los más altos principios éticos y tendrá como fundamento la buena fe.

Selena Vallejos Suárez

7-0258-0616

Carta del Director de Carrera

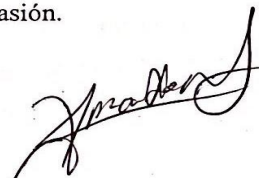
San José, Agosto de 2019

Señores
Universidad Internacional de las Américas
Estimados señores:

El suscrito MSc. Dinier Amador Serrano, Director de las Carreras de Inglés, hace constar que ha revisado la Tesina del estudiante, Selena Vallejos Suárez, portadora de la cédula de identidad no. 7-0258-0616 que ha titulado: DEDUCTIVE REASONING AS A STRATEGY TO OVERCOME NATIVE LANGUAGE INTERFERENCE IN SPEAKING TASKS WITH EIGHTH GRADERS AT JORGE VOLIO JIMÉNEZ BILINGUAL HIGH SCHOOL DURING THE SECOND QUARTER OF 2019

La mencionada Tesina, responde a los requisitos exigidos en la Guía que nuestra carrera tiene para estos casos. Por tanto, se autoriza al autor para que lo presente ante el tribunal examinador nombrado para esta ocasión.

Atentamente,



MSc. Dinier Amador Serrano
Director de las Carreras de Inglés

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